

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Kovesdi et al.

Group Art Unit: not assigned

Application No. not assigned

Examiner: not assigned

Filing Date: April 10, 2001

For: VEGF FUSION PROTEINS



SUBMISSION OF NUCLEOTIDE/AMINO ACID SEQUENCE DISCLOSURES AND  
STATEMENT UNDER 37 C.F.R. §§ 1.821-1.825

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In accordance with the requirements of 37 CFR 1.821-1.825, a sequence listing is being submitted as part of the patent application. The sequence listing is in the form of both a paper copy and a computer readable copy on a computer diskette. The undersigned hereby verifies that the content of the paper copy and the computer readable copy, as concurrently being submitted, are the same.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Len S. Smith".

\_\_\_\_\_  
Len S. Smith, Registration No. 43,139  
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**LEYDIG, VOIT & MAYER, LTD.**  
Two Prudential Plaza, Suite 4900  
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Chicago, Illinois 60601-6780  
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(312) 616-5700 (facsimile)

Date: April 10, 2001

## SEQUENCE LISTING

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Kessler, Paul

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 Cys Asp Met Glu Thr Ser Gly Gly Gly Trp Thr Ile Ile Gln Arg Arg  
 35 40 45  
 Lys Ser Gly Leu Val Ser Phe Tyr Arg Asp Trp Lys Gln Tyr Lys Gln  
 50 55 60

Gly Phe Gly Ser Ile Arg Gly Asp Phe Trp Leu Gly Asn Glu His Ile  
65 70 75 80

His Arg Leu Ser Arg Gln Pro Thr Arg Leu Arg Val Glu Met Glu Asp  
85 90 95

Trp Glu Gly Asn Leu Arg Tyr Ala Glu Tyr Ser His Phe Val Leu Gly  
100 105 110

Asn Glu Leu Asn Ser Tyr Arg Leu Phe Leu Gly Asn Tyr Thr Gly Asn  
115 120 125

Val Gly Asn Asp Ala Leu Gln Tyr His Asn Asn Thr Ala Phe Ser Thr  
130 135 140

Lys Asp Lys Asp Asn Asp Asn Cys Leu Asp Lys Cys Ala Gln Leu Arg  
145 150 155 160

Lys Gly Gly Tyr Trp Tyr Asn Cys Cys Thr Asp Ser Asn Leu Asn Gly  
165 170 175

Val Tyr Tyr Arg Leu Gly Glu His Asn Lys His Leu Asp Gly Ile Thr  
180 185 190

Trp Tyr Gly Trp His Gly Ser Thr Tyr Ser Leu Lys Arg Val Glu Met  
195 200 205

Lys Ile Arg Pro Glu Asp Phe Lys Pro  
210 215

<210> 24

<211> 219

<212> PRT

<213> Homo sapiens

<400> 24

Lys Pro Val Gly Pro Trp Gln Asp Cys Ala Glu Ala Arg Gln Ala Gly  
1 5 10 15

His Glu Gln Ser Gly Val Tyr Glu Leu Arg Val Gly Arg His Val Val  
20 25 30

Ser Val Trp Cys Glu Gln Gln Leu Glu Gly Gly Gly Trp Thr Val Ile  
35 40 45

Gln Arg Arg Gln Asp Gly Ser Val Asn Phe Phe Thr Thr Trp Gln His  
50 55 60

Tyr Lys Ala Gly Phe Gly Arg Pro Asp Gly Glu Tyr Trp Leu Gly Leu  
65 70 75 80

Glu Pro Val Tyr Gln Leu Thr Ser Arg Gly Asp His Glu Leu Leu Val  
85 90 95

Leu Leu Glu Asp Trp Gly Gly Arg Gly Ala Arg Ala His Tyr Asp Gly  
100 105 110

Phe Ser Leu Glu Pro Glu Ser Asp His Tyr Arg Leu Arg Leu Gly Gln

115                      120                      125  
 Tyr His Gly Asp Ala Gly Asp Ser Leu Ser Trp His Asn Asp Lys Pro  
     130                      135                      140  
 Phe Ser Thr Val Asp Arg Asp Arg Asp Ser Tyr Ser Gly Asn Cys Ala  
     145                      150                      155                      160  
 Leu Tyr Gln Arg Gly Gly Trp Trp Tyr His Ala Cys Ala His Ser Asn  
                     165                      170                      175  
 Leu Asn Gly Val Trp His His Gly Gly His Tyr Arg Ser Arg Tyr Gln  
                     180                      185                      190  
 Asp Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly Ala Tyr Ser Leu Arg  
                     195                      200                      205  
 Lys Ala Ala Met Leu Ile Arg Pro Leu Lys Leu  
     210                      215  
 <210> 25  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens  
 <400> 25  
 Leu Pro Arg Asp Cys Gln Glu Leu Phe Gln Val Gly Glu Arg Gln Ser  
     1                      5                      10                      15  
 Gly Leu Phe Glu Ile Gln Pro Gln Gly Ser Pro Pro Phe Leu Val Asn  
                     20                      25                      30  
 Cys Lys Met Thr Ser Asp Gly Gly Trp Thr Val Ile Gln Arg Arg His  
                     35                      40                      45  
 Asp Gly Ser Val Asp Phe Asn Arg Pro Trp Glu Ala Tyr Lys Ala Gly  
     50                      55                      60  
 Phe Gly Asp Pro His Gly Glu Phe Trp Leu Gly Leu Glu Lys Val His  
     65                      70                      75                      80  
 Ser Ile Thr Gly Asp Arg Asn Ser Arg Leu Ala Val Gln Leu Arg Asp  
                     85                      90                      95  
 Trp Asp Gly Asn Ala Glu Leu Leu Gln Phe Ser Val His Leu Gly Gly  
                     100                      105                      110  
 Glu Asp Thr Ala Tyr Ser Leu Gln Leu Thr Ala Pro Val Ala Gly Gln  
                     115                      120                      125  
 Leu Gly Ala Thr Thr Val Pro Pro Ser Gly Leu Ser Val Pro Phe Ser  
     130                      135                      140  
 Thr Trp Asp Gln Asp His Asp Leu Arg Arg Asp Lys Asn Cys Ala Lys  
     145                      150                      155                      160  
 Ser Leu Ser Gly Gly Trp Trp Phe Gly Thr Cys Ser His Ser Asn Leu  
                     165                      170                      175



Asn Gly Gln Tyr Phe Arg Ser Ile Pro Gln Gln Arg Gln Lys Leu Lys  
 180 185 190

Lys Gly Ile Phe Trp Lys Thr Trp Arg Gly Arg Tyr Tyr Pro Leu Gln  
 195 200 205

Ala Thr Thr Met Leu Ile Gln  
 210 215

<210> 26

<211> 222

<212> PRT

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Source not known

<400> 26

Pro Arg Asp Cys Gln Glu Leu Phe Gln Val Gly Glu Arg Gln Ser Gly  
 1 5 10 15

Leu Phe Glu Ile Gln Pro Gln Gly Ser Pro Pro Phe Leu Val Asn Cys  
 20 25 30

Lys Met Thr Ser Asp Gly Gly Trp Thr Val Ile Gln Arg Arg His Asp  
 35 40 45

Gly Ser Val Asp Phe Asn Arg Pro Trp Glu Ala Tyr Lys Ala Gly Phe  
 50 55 60

Gly Asp Pro His Gly Glu Phe Trp Leu Gly Leu Glu Lys Val His Ser  
 65 70 75 80

Ile Thr Gly Asp Arg Asn Ser Arg Leu Ala Val Gln Leu Arg Asp Trp  
 85 90 95

Asp Gly Asn Ala Glu Leu Leu Gln Phe Ser Val His Leu Gly Gly Glu  
 100 105 110

Asp Thr Ala Tyr Ser Leu Gln Leu Thr Ala Pro Val Ala Gly Gln Leu  
 115 120 125

Gly Ala Thr Thr Val Pro Pro Ser Gly Leu Ser Val Pro Phe Ser Thr  
 130 135 140

Trp Asp Gln Asp His Asp Leu Arg Arg Asp Lys Asn Cys Ala Lys Ser  
 145 150 155 160

Leu Ser Gly Gly Trp Trp Phe Gly Thr Cys Ser His Ser Asn Leu Asn  
 165 170 175

Gly Gln Tyr Phe Arg Ser Ile Pro Gln Gln Arg Gln Lys Leu Lys Lys  
 180 185 190

Gly Ile Phe Trp Lys Thr Trp Arg Gly Arg Tyr Tyr Pro Leu Gln Ala

195 200 205

Thr Thr Met Leu Ile Gln Pro Met Ala Ala Glu Ala Ala Ser  
210 215 220

<210> 27  
<211> 222  
<212> PRT  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> {}..{}  
<223> Source not known

<400> 27

His Asp Gly Ile Pro Ala Glu Cys Thr Thr Ile Tyr Asn Arg Gly Glu  
1 5 10 15

His Thr Ser Gly Met Tyr Ala Ile Arg Pro Ser Asn Ser Gln Val Phe  
20 25 30

His Val Tyr Cys Asp Val Ile Ser Gly Ser Pro Trp Thr Leu Ile Gln  
35 40 45

His Arg Ile Asp Gly Ser Gln Asn Phe Asn Glu Thr Trp Glu Asn Tyr  
50 55 60

Lys Tyr Gly Phe Gly Arg Leu Asp Gly Glu Phe Trp Leu Gly Leu Glu  
65 70 75 80

Lys Ile Tyr Ser Ile Val Lys Gln Ser Asn Tyr Val Leu Arg Ile Glu  
85 90 95

Leu Glu Asp Trp Lys Asp Asn Lys His Tyr Ile Glu Tyr Ser Phe Tyr  
100 105 110

Leu Gly Asn His Glu Thr Asn Tyr Thr Leu His Leu Val Ala Ile Thr  
115 120 125

Gly Asn Val Pro Asn Ala Ile Pro Glu Asn Lys Asp Leu Val Phe Ser  
130 135 140

Thr Trp Asp His Lys Ala Lys Gly His Phe Asn Cys Pro Glu Gly Tyr  
145 150 155 160

Ser Gly Gly Trp Trp Trp His Asp Glu Cys Gly Glu Asn Asn Leu Asn  
165 170 175

Gly Lys Tyr Asn Lys Pro Arg Ala Lys Ser Lys Pro Glu Arg Arg Arg  
180 185 190

Gly Leu Ser Trp Lys Ser Gln Asn Gly Arg Leu Tyr Ser Ile Lys Ser  
195 200 205

Thr Lys Met Leu Ile His Pro Thr Asp Ser Glu Ser Phe Glu  
210 215 220

<210> 28  
 <211> 214  
 <212> PRT  
 <213> Mus musculus

<400> 28

Arg Asp Cys Gln Glu Leu Phe Gln Glu Gly Glu Arg His Ser Gly Leu  
 1 5 10 15

Phe Gln Ile Gln Pro Leu Gly Ser Pro Pro Phe Leu Val Asn Cys Glu  
 20 25 30

Met Thr Ser Asp Gly Gly Trp Thr Val Ile Gln Arg Arg Leu Asn Gly  
 35 40 45

Ser Val Asp Phe Asn Gln Ser Trp Glu Ala Tyr Lys Asp Gly Phe Gly  
 50 55 60

Asp Pro Gln Gly Glu Phe Trp Leu Gly Leu Glu Lys Met His Ser Ile  
 65 70 75 80

Thr Gly Asn Arg Gly Ser Gln Leu Ala Val Gln Leu Gln Asp Trp Asp  
 85 90 95

Gly Asn Ala Lys Leu Leu Gln Phe Pro Ile His Leu Gly Gly Glu Asp  
 100 105 110

Thr Ala Tyr Ser Leu Gln Leu Thr Glu Pro Thr Ala Asn Glu Leu Gly  
 115 120 125

Ala Thr Asn Val Ser Pro Asn Gly Leu Ser Leu Pro Phe Ser Thr Trp  
 130 135 140

Asp Gln Asp His Asp Leu Arg Gly Asp Leu Asn Cys Ala Lys Ser Leu  
 145 150 155 160

Ser Gly Gly Trp Trp Phe Gly Thr Cys Ser His Ser Asn Leu Asn Gly  
 165 170 175

Gln Tyr Phe His Ser Ile Pro Arg Gln Arg Gln Glu Arg Lys Gly  
 180 185 190

Ile Phe Trp Lys Thr Trp Lys Gly Arg Tyr Tyr Pro Leu Gln Ala Thr  
 195 200 205

Thr Leu Leu Ile Gln Pro  
 210

<210> 29  
 <211> 216  
 <212> PRT  
 <213> Homo sapiens

<400> 29

Phe Gln Asp Cys Ala Glu Ile Lys Arg Ser Gly Val Asn Thr Ser Gly  
 1 5 10 15

Val Tyr Thr Ile Tyr Glu Thr Asn Met Thr Lys Pro Leu Lys Val Phe  
 20 25 30  
 Cys Asp Met Glu Thr Asp Gly Gly Gly Trp Thr Leu Ile Gln His Arg  
 35 40 45  
 Glu Asp Gly Ser Val Asn Phe Gln Arg Thr Trp Glu Glu Tyr Lys Glu  
 50 55 60  
 Gly Phe Gly Asn Val Ala Arg Glu His Trp Leu Gly Asn Glu Ala Val  
 65 70 75 80  
 His Arg Leu Thr Ser Arg Thr Ala Tyr Leu Leu Arg Val Glu Leu His  
 85 90 95  
 Asp Trp Glu Gly Arg Gln Thr Ser Ile Gln Tyr Glu Asn Phe Gln Leu  
 100 105 110  
 Gly Ser Glu Arg Gln Arg Tyr Ser Leu Ser Val Asn Asp Ser Ser Ser  
 115 120 125  
 Ser Ala Gly Arg Lys Asn Ser Leu Ala Pro Gln Gly Thr Lys Phe Ser  
 130 135 140  
 Thr Lys Asp Met Asp Asn Asp Asn Cys Met Cys Lys Cys Ala Gln Met  
 145 150 155 160  
 Leu Ser Gly Gly Trp Trp Phe Asp Ala Cys Gly Leu Ser Asn Leu Asn  
 165 170 175  
 Gly Ile Tyr Tyr Ser Val His Gln His Leu His Lys Ile Asn Gly Ile  
 180 185 190  
 Arg Trp His Tyr Phe Arg Gly Pro Ser Tyr Ser Leu His Gly Thr Arg  
 195 200 205  
 Met Met Leu Arg Pro Met Gly Ala  
 210 215  
 <210> 30  
 <211> 216  
 <212> PRT  
 <213> Homo sapiens  
 <400> 30  
 Phe Gln Asp Cys Ala Glu Ile Gln Arg Ser Gly Ala Ser Ala Ser Gly  
 1 5 10 15  
 Val Tyr Thr Ile Gln Val Ser Asn Ala Thr Lys Pro Arg Lys Val Phe  
 20 25 30  
 Cys Asp Leu Gln Ser Ser Gly Gly Arg Trp Thr Leu Ile Gln Arg Arg  
 35 40 45  
 Glu Asn Gly Thr Val Asn Phe Gln Arg Asn Trp Lys Asp Tyr Lys Gln  
 50 55 60  
 Gly Phe Gly Asp Pro Ala Gly Glu His Trp Leu Gly Asn Glu Val Val

65	70										75					80				
His	Gln	Leu	Thr	Arg	Arg	Ala	Ala	Tyr	Ser	Leu	Arg	Val	Glu	Leu	Gln					
				85					90					95						
Asp	Trp	Glu	Gly	His	Glu	Ala	Tyr	Ala	Gln	Tyr	Glu	His	Phe	His	Leu					
				100					105					110						
Gly	Ser	Glu	Asn	Gln	Leu	Tyr	Arg	Leu	Ser	Val	Val	Gly	Tyr	Ser	Gly					
				115					120					125						
Ser	Ala	Gly	Arg	Gln	Ser	Ser	Leu	Val	Leu	Gln	Asn	Thr	Ser	Phe	Ser					
				130					135					140						
Thr	Leu	Asp	Ser	Asp	Asn	Asp	His	Cys	Leu	Cys	Lys	Cys	Ala	Gln	Val					
				145					150					155						
Met	Ser	Gly	Gly	Trp	Trp	Phe	Asp	Ala	Cys	Gly	Leu	Ser	Asn	Leu	Asn					
				165					170					175						
Gly	Val	Tyr	Tyr	His	Ala	Pro	Asp	Asn	Lys	Tyr	Lys	Met	Asp	Gly	Ile					
				180					185					190						
Arg	Trp	His	Tyr	Phe	Lys	Gly	Pro	Ser	Tyr	Ser	Leu	Arg	Ala	Ser	Arg					
				195					200					205						
Met	Met	Ile	Arg	Pro	Leu	Asp	Ile													
				210					215											
<210>	31																			
<211>	224																			
<212>	PRT																			
<213>	Homo sapiens																			
<400>	31																			
Lys	Pro	Ser	Gly	Pro	Trp	Arg	Asp	Cys	Leu	Gln	Ala	Leu	Glu	Asp	Gly					
1					5					10					15					
His	Asp	Thr	Ser	Ser	Ile	Tyr	Leu	Val	Lys	Pro	Glu	Asn	Thr	Asn	Arg					
				20					25					30						
Leu	Met	Gln	Val	Trp	Cys	Asp	Gln	Arg	His	Asp	Pro	Gly	Gly	Trp	Thr					
				35					40					45						
Val	Ile	Gln	Arg	Arg	Leu	Asp	Gly	Ser	Val	Asn	Phe	Phe	Arg	Asn	Trp					
				50					55					60						
Glu	Thr	Tyr	Lys	Gln	Gly	Phe	Gly	Asn	Ile	Asp	Gly	Glu	Tyr	Trp	Leu					
				65					70					75						
Gly	Leu	Glu	Asn	Ile	Tyr	Trp	Leu	Thr	Asn	Gln	Gly	Asn	Tyr	Lys	Leu					
				85					90					95						
Leu	Val	Thr	Met	Glu	Asp	Trp	Ser	Gly	Arg	Lys	Val	Phe	Ala	Glu	Tyr					
				100					105					110						
Ala	Ser	Phe	Arg	Leu	Glu	Pro	Glu	Ser	Glu	Tyr	Tyr	Lys	Leu	Arg	Leu					
				115					120					125						

Gly Arg Tyr His Gly Asn Ala Gly Asp Ser Phe Thr Trp His Asn Gly  
 130 135 140  
 Lys Gln Phe Thr Thr Leu Asp Arg Asp His Asp Val Tyr Thr Gly Asn  
 145 150 155 160  
 Cys Ala His Tyr Gln Lys Gly Gly Trp Trp Tyr Asn Ala Cys Ala His  
 165 170 175  
 Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Arg  
 180 185 190  
 Tyr Gln Asp Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly Ser Tyr Ser  
 195 200 205  
 Leu Lys Lys Val Val Met Met Ile Arg Pro Asn Pro Asn Thr Phe His  
 210 215 220  
 <210> 32  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens  
 <400> 32  
 Ile Asn Glu Gly Pro Phe Lys Asp Cys Gln Gln Ala Lys Glu Ala Gly  
 1 5 10 15  
 His Ser Val Ser Gly Ile Tyr Met Ile Lys Pro Glu Asn Ser Asn Gly  
 20 25 30  
 Pro Met Gln Leu Trp Cys Glu Asn Ser Leu Asp Pro Gly Gly Trp Thr  
 35 40 45  
 Val Ile Gln Lys Arg Thr Asp Gly Ser Val Asn Phe Phe Arg Asn Trp  
 50 55 60  
 Glu Asn Tyr Lys Lys Gly Phe Gly Asn Ile Asp Gly Glu Tyr Trp Leu  
 65 70 75 80  
 Gly Leu Glu Asn Ile Tyr Met Leu Ser Asn Gln Asp Asn Tyr Lys Leu  
 85 90 95  
 Leu Ile Glu Leu Glu Asp Trp Ser Asp Lys Lys Val Tyr Ala Glu Tyr  
 100 105 110  
 Ser Ser Phe Arg Leu Glu Pro Glu Ser Glu Phe Tyr Arg Leu Arg Leu  
 115 120 125  
 Gly Thr Tyr Gln Gly Asn Ala Gly Asp Ser Met Met Trp His Asn Gly  
 130 135 140  
 Lys Gln Phe Thr Thr Leu Asp Arg Asp Lys Asp Met Tyr Ala Gly Asn  
 145 150 155 160  
 Cys Ala His Phe His Lys Gly Gly Trp Trp Tyr Asn Ala Cys Ala His  
 165 170 175

Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Lys  
180 185 190

His Gln Asp Gly Ile Phe Trp Ala Glu Tyr Arg Gly Gly Ser Tyr Ser  
195 200 205

Leu Arg Ala Val Gln Met Met Ile Lys Pro Ile Asp  
210 215 220

<210> 33

<211> 136

<212> PRT

<213> Homo sapiens

<400> 33

Gly Lys Lys Glu Lys Pro Glu Lys Lys Val Lys Lys Ser Asp Cys Gly  
1 5 10 15

Glu Trp Gln Trp Ser Val Cys Val Pro Thr Ser Gly Asp Cys Gly Leu  
20 25 30

Gly Thr Arg Glu Gly Thr Arg Thr Gly Ala Glu Cys Lys Gln Thr Met  
35 40 45

Lys Thr Gln Arg Cys Lys Ile Pro Cys Asn Trp Lys Lys Gln Phe Gly  
50 55 60

Ala Glu Cys Lys Tyr Gln Phe Gln Ala Trp Gly Glu Cys Asp Leu Asn  
65 70 75 80

Thr Ala Leu Lys Thr Arg Thr Gly Ser Leu Lys Arg Ala Leu His Asn  
85 90 95

Ala Glu Cys Gln Lys Thr Val Thr Ile Ser Lys Pro Cys Gly Lys Leu  
100 105 110

Thr Lys Pro Lys Pro Gln Ala Glu Ser Lys Lys Lys Lys Glu Gly  
115 120 125

Lys Lys Gln Glu Lys Met Leu Asp  
130 135

<210> 34

<211> 121

<212> PRT

<213> Homo sapiens

<400> 34

Lys Lys Lys Asp Lys Val Lys Lys Gly Gly Pro Gly Ser Glu Cys Ala  
1 5 10 15

Glu Trp Ala Trp Gly Pro Cys Thr Pro Ser Ser Lys Asp Cys Gly Val  
20 25 30

Gly Phe Arg Glu Gly Thr Cys Gly Ala Gln Thr Gln Arg Ile Arg Cys  
35 40 45

Arg Val Pro Cys Asn Trp Lys Lys Glu Phe Gly Ala Asp Cys Lys Tyr  
50 55 60

Lys Phe Glu Asn Trp Gly Ala Cys Asp Gly Gly Thr Gly Thr Lys Val  
65 70 75 80

Arg Gln Gly Thr Leu Lys Lys Ala Arg Tyr Asn Ala Gln Cys Gln Glu  
85 90 95

Thr Ile Arg Val Thr Lys Pro Cys Thr Pro Lys Thr Lys Ala Lys Ala  
100 105 110

Lys Ala Lys Lys Gly Lys Gly Lys Asp  
115 120

<210> 35

<211> 43

<212> PRT

<213> Homo sapiens

<400> 35

Cys Lys Tyr Gln Phe Gln Ala Trp Gly Glu Cys Asp Leu Asn Thr Ala  
1 5 10 15

Leu Lys Thr Arg Thr Gly Ser Leu Lys Arg Ala Leu His Asn Ala Glu  
20 25 30

Cys Gln Lys Lys Thr Val Thr Ile Ser Lys Pro Cys  
35 40

<210> 36

<211> 54

<212> PRT

<213> Homo sapiens

<400> 36

Ala Glu Cys Lys Tyr Gln Phe Gln Ala Trp Gly Glu Cys Asp Leu Asn  
1 5 10 15

Thr Ala Leu Lys Thr Arg Thr Gly Ser Leu Lys Arg Ala Leu His Asn  
20 25 30

Ala Glu Cys Gln Lys Thr Val Thr Ile Ser Lys Pro Cys Gly Lys Leu  
35 40 45

Thr Lys Pro Lys Pro Gln  
50

<210> 37

<211> 72

<212> PRT

<213> Homo sapiens

<400> 37

Ala Glu Cys Lys Tyr Gln Phe Gln Ala Trp Gly Glu Cys Asp Leu Asn  
1 5 10 15



Thr Ala Leu Lys Thr Arg Thr Gly Ser Leu Lys Arg Ala Leu His Asn  
20 25 30

Ala Glu Cys Gln Lys Thr Val Thr Ile Ser Lys Pro Cys Gly Lys Leu  
35 40 45

Thr Lys Pro Lys Pro Gln Ala Glu Ser Lys Lys Lys Lys Lys Glu Gly  
50 55 60

Lys Lys Gln Glu Lys Met Leu Asp  
65 70

<210> 38

<211> 80

<212> PRT

<213> Homo sapiens

<400> 38

Cys Gly Glu Trp Thr Trp Gly Pro Cys Ile Pro Asn Ser Lys Asp Cys  
1 5 10 15

Gly Leu Gly Thr Arg Glu Gly Thr Cys Lys Gln Glu Thr Arg Lys Leu  
20 25 30

Lys Cys Lys Ile Pro Cys Asn Trp Lys Lys Gln Phe Gly Ala Asp Cys  
35 40 45

Lys Tyr Lys Phe Glu Ser Trp Gly Glu Cys Asp Ala Asn Thr Gly Leu  
50 55 60

Lys Thr Arg Ser Gly Thr Leu Lys Lys Ala Leu Tyr Asn Ala Asp Cys  
65 70 75 80

<210> 39

<211> 21

<212> PRT

<213> Homo sapiens

<400> 39

Glu Lys Lys Glu Lys Pro Glu Lys Lys Val Lys Lys Ser Asp Cys Gly  
1 5 10 15

Glu Trp Gln Trp Ser  
20

<210> 40

<211> 16

<212> PRT

<213> Homo sapiens

<400> 40

Ser Lys Lys Lys Lys Lys Glu Gly Lys Lys Gln Glu Lys Met Leu Asp  
1 5 10 15

<210> 41

<211> 61  
 <212> PRT  
 <213> Homo sapiens

<400> 41

Asp Cys Lys Tyr Lys Phe Glu Asn Trp Gly Ala Cys Asp Gly Gly Thr  
 1 5 10 15  
 Gly Thr Lys Val Arg Gln Gly Thr Leu Lys Lys Ala Arg Tyr Asn Ala  
 20 25 30  
 Gln Cys Gln Glu Thr Ile Arg Val Thr Lys Pro Cys Thr Pro Lys Thr  
 35 40 45  
 Lys Ala Lys Ala Lys Ala Lys Lys Gly Lys Gly Lys Asp  
 50 55 60

<210> 42  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens

<400> 42

Lys Tyr Lys Phe Glu Asn Trp Gly Ala Cys Asp Gly Gly Thr Gly Thr  
 1 5 10 15  
 Lys Val Arg Gln Gly Thr Leu Lys Lys Ala Arg Tyr Asn Ala Gln Cys  
 20 25 30  
 Gln Glu Thr Ile Arg Val Thr Lys Pro Cys  
 35 40

<210> 43  
 <211> 32  
 <212> PRT  
 <213> Homo sapiens

<400> 43

Met Gln Ala Gln Gln Tyr Gln Gln Gln Arg Arg Lys Phe Ala Ala Ala  
 1 5 10 15  
 Phe Leu Ala Phe Ile Phe Ile Leu Ala Ala Val Asp Thr Ala Glu Ala  
 20 25 30

<210> 44  
 <211> 20  
 <212> PRT  
 <213> Homo sapiens

<400> 44

Met Gln His Arg Gly Phe Leu Leu Leu Thr Leu Leu Ala Leu Leu Ala  
 1 5 10 15  
 Leu Thr Ser Ala  
 20

<210> 45  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 45

```

Phe Asn Leu Pro Pro Gly Asn Tyr Lys Lys Pro Lys Leu Leu Tyr Cys
1          5          10          15

Ser Asn Gly Gly His Phe Leu Arg Ile Leu Pro Asp Gly Thr Val Asp
          20          25          30

Gly Thr Arg Asp Arg Ser Asp Gln His Ile Gln Leu Gln Leu Ser Ala
          35          40          45

Glu Ser Val Gly Glu Val Tyr Ile Lys Ser Thr Glu Thr Gly Gln Tyr
          50          55          60

Leu Ala Met Asp Thr Asp Gly Leu Leu Tyr Gly Ser Gln Thr Pro Asn
65          70          75          80

Glu Glu Cys Leu Phe Leu Glu Arg Leu Glu Glu Asn His Tyr Asn Thr
          85          90          95

Tyr Ile Ser Lys Lys His Ala Glu Lys Asn Trp Phe Val Gly Leu Lys
          100          105          110

Lys Asn Gly Ser Cys Lys Arg Gly Pro Arg Thr His Tyr Gly Gln Lys
          115          120          125

Ala Ile Leu Phe Leu Pro Leu Pro Val Ser Ser
          130          135

```

<210> 46  
 <211> 15  
 <212> PRT  
 <213> Homo sapiens

<400> 46

```

Met Ala Glu Gly Glu Ile Thr Thr Phe Thr Ala Leu Thr Glu Lys
1          5          10          15

```

<210> 47  
 <211> 8  
 <212> PRT  
 <213> Homo sapiens

<400> 47

```

Lys Lys Asn Gly Ser Cys Lys Arg
1          5

```

<210> 48  
 <211> 13  
 <212> PRT  
 <213> Artificial/Unknown

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<220>
<221> misc_feature
<222> ().,()
<223> Synthetic

<220>
<221> misc_feature
<222> (5)..(5)
<223> "Xaa" may be between 5 and 7 of any amino acids

```

```

<220>
<221> misc_feature
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<223> "Xaa" may be any amino acid

```

```

<400> 48

```

```

Arg Leu Tyr Cys Xaa Leu Xaa Xaa Xaa Pro Asp Gly Arg
1              5                      10

```

```

<210> 49
<211> 4
<212> PRT
<213> Homo sapiens

```

```

<400> 49

```

```

Ile Ser Ser Lys
1

```

```

<210> 50
<211> 5
<212> PRT
<213> Homo sapiens

```

```

<400> 50

```

```

Lys Lys Pro Lys Leu
1              5

```

```

<210> 51
<211> 535
<212> PRT
<213> Homo sapiens

```

```

<400> 51

```

```

Met Leu Gly Pro Cys Met Leu Leu Leu Leu Leu Gly Leu Arg
1              5                      10          15

```

```

Leu Gln Leu Ser Leu Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp
20              25          30

```

```

Phe Trp Asn Arg Glu Ala Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu
35              40          45

```

```

Gln Pro Ala Gln Thr Ala Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp
50              55          60

```

Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln  
 65 70 75 80  
 Lys Lys Asp Lys Leu Gly Pro Glu Ile Pro Leu Ala Met Asp Arg Phe  
 85 90 95  
 Pro Tyr Val Ala Leu Ser Lys Thr Tyr Asn Val Asp Lys His Val Pro  
 100 105 110  
 Asp Ser Gly Ala Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn  
 115 120 125  
 Phe Gln Thr Ile Gly Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn  
 130 135 140  
 Thr Thr Arg Gly Asn Glu Val Ile Ser Val Met Asn Arg Ala Lys Lys  
 145 150 155 160  
 Ala Gly Lys Ser Val Gly Val Val Thr Thr Thr Arg Val Gln His Ala  
 165 170 175  
 Ser Pro Ala Gly Thr Tyr Ala His Thr Val Asn Arg Asn Trp Tyr Ser  
 180 185 190  
 Asp Ala Asp Val Pro Ala Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile  
 195 200 205  
 Ala Thr Gln Leu Ile Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly  
 210 215 220  
 Gly Arg Lys Tyr Met Phe Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro  
 225 230 235 240  
 Asp Asp Tyr Ser Gln Gly Gly Thr Arg Leu Asp Gly Lys Asn Leu Val  
 245 250 255  
 Gln Glu Trp Leu Ala Lys Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg  
 260 265 270  
 Thr Glu Leu Met Gln Ala Ser Leu Asp Pro Ser Val Thr His Leu Met  
 275 280 285  
 Gly Leu Phe Glu Pro Gly Asp Met Lys Tyr Glu Ile His Arg Asp Ser  
 290 295 300  
 Thr Leu Asp Pro Ser Leu Met Glu Met Thr Glu Ala Ala Leu Arg Leu  
 305 310 315 320  
 Leu Ser Arg Asn Pro Arg Gly Phe Phe Leu Phe Val Glu Gly Gly Arg  
 325 330 335  
 Ile Asp His Gly His His Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu  
 340 345 350  
 Thr Ile Met Phe Asp Asp Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser  
 355 360 365  
 Glu Glu Asp Thr Leu Ser Leu Val Thr Ala Asp His Ser His Val Phe

370                      375                      380  
 Ser Phe Gly Gly Tyr Pro Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala  
 385                      390                      395                      400  
 Pro Gly Lys Ala Arg Asp Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly  
                                  405                      410                      415  
 Asn Gly Pro Gly Tyr Val Leu Lys Asp Gly Ala Arg Pro Asp Val Thr  
                                  420                      425                      430  
 Glu Ser Glu Ser Gly Ser Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro  
                                  435                      440                      445  
 Leu Asp Glu Glu Thr His Ala Gly Glu Asp Val Ala Val Phe Ala Arg  
                                  450                      455                      460  
 Gly Pro Gln Ala His Leu Val His Gly Val Gln Glu Gln Thr Phe Ile  
 465                      470                      475                      480  
 Ala His Val Met Ala Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys  
                                  485                      490                      495  
 Asp Leu Ala Pro Pro Ala Gly Thr Thr Asp Ala Ala His Pro Gly Arg  
                                  500                      505                      510  
 Ser Val Val Pro Ala Leu Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu  
                                  515                      520                      525  
 Leu Glu Thr Ala Thr Ala Pro  
                                  530                      535  
 <210> 52  
 <211> 22  
 <212> PRT  
 <213> Homo sapiens  
 <400> 52  
 Met Leu Gly Pro Cys Met Leu Leu Leu Leu Leu Leu Gly Leu Arg  
 1                      5                      10                      15  
 Leu Gln Leu Ser Leu Gly  
                                  20  
 <210> 53  
 <211> 29  
 <212> PRT  
 <213> Homo sapiens  
 <400> 53  
 Ala Ala His Pro Gly Arg Ser Val Val Pro Ala Leu Leu Pro Leu Leu  
 1                      5                      10                      15  
 Ala Gly Thr Leu Leu Leu Leu Glu Thr Ala Thr Ala Pro  
                                  20                      25  
 <210> 54

<211> 108  
 <212> PRT  
 <213> Homo sapiens

<400> 54

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Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln
1              5              10              15

Lys Lys Asp Lys Leu Gly Pro Glu Ile Pro Leu Ala Met Asp Arg Phe
                20              25              30

Pro Tyr Val Ala Leu Ser Lys Thr Tyr Asn Val Asp Lys His Val Pro
                35              40              45

Asp Ser Gly Ala Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn
50              55              60

Phe Gln Thr Ile Gly Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn
65              70              75              80

Thr Thr Arg Gly Asn Glu Val Ile Ser Val Met Asn Arg Ala Lys Lys
                85              90              95

Ala Gly Lys Ser Val Gly Val Val Thr Thr Thr Arg
                100              105
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<210> 55  
 <211> 20  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
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 <223> Synthetic

<220>  
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 <223> "Xaa" may be any amino acid

<400> 55

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Ala Gln Val Pro Asp Ser Ala Xaa Thr Ala Thr Ala Tyr Leu Cys Gly
1              5              10              15

Val Lys Ala Asn
                20
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<210> 56  
 <211> 86  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
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 <223> Synthetic

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<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<222> (39)..(39)
<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<223> "Xaa" may be any amino acid

<220>
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<222> (56)..(57)
<223> "Xaa" may be any amino acid

<220>
<221> misc_feature
<222> (65)..(65)
<223> "Xaa" may be any amino acid

<220>
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<222> (78)..(79)
<223> "Xaa" may be any amino acid

<220>
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<222> (81)..(81)
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<223> "Xaa" may be any amino acid

<220>

<221> misc\_feature

<222> (83)..(83)

<223> "Xaa" may be any amino acid

<400> 56

Thr Asn Val Ala Lys Asn Xaa Ile Met Phe Leu Gly Asp Gly Met Gly  
1 5 10 15

Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Xaa His His  
20 25 30

Xaa Xaa Gly Xaa Glu Thr Xaa Leu Xaa Met Asp Xaa Phe Pro Xaa Val  
35 40 45

Ala Leu Ser Lys Thr Tyr Asn Xaa Xaa Ala Gln Val Pro Asp Ser Ala  
50 55 60

Xaa Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Xaa Xaa Thr  
65 70 75 80

Xaa Gly Xaa Ser Ala Ala  
85

<210> 57

<211> 53

<212> PRT

<213> Artificial/Unknown

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<223> Synthetic

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<222> (6)..(6)

<223> "Xaa" may be any amino acid

<220>

<221> misc\_feature

<222> (16)..(16)

<223> "Xaa" may be any amino acid

<220>

<221> misc\_feature

<222> (22)..(22)

<223> "Xaa" may be any amino acid

<220>

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<222> (34)..(35)

<223> "Xaa" may be any amino acid

<220>

<221> misc\_feature

&lt;222&gt; (41)..(42)

&lt;223&gt; "Xaa" may be any amino acid

&lt;400&gt; 57

Glu Asp Thr Leu Thr Xaa Val Thr Ala Asp His Ser His Val Phe Xaa  
 1 5 10 15

Phe Gly Gly Tyr Thr Xaa Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro  
 20 25 30

Met Xaa Xaa Asp Thr Asp Lys Lys Xaa Xaa Thr Ala Ile Leu Tyr Gly  
 35 40 45

Asn Gly Pro Gly Tyr  
 50

&lt;210&gt; 58

&lt;211&gt; 22

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 58

Val Val Pro Ala Leu Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu  
 1 5 10 15

Glu Thr Ala Thr Ala Pro  
 20

&lt;210&gt; 59

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 59

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys

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115              120              125
Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Lys Ser Val
130              135              140

Arg Gly Lys Gly Cys Asp Lys Pro Arg Arg
145              150

<210> 60
<211> 162
<212> PRT
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> {}..{}
<223> Synthetic

<400> 60

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu
1          5              10              15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly
20          25              30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
35          40              45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu
50          55              60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu
65          70              75              80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro
85          90              95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His
100         105              110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys
115         120              125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Lys Ser Val
130         135              140

Arg Gly Lys Gly Lys Gly Gln Lys Arg Lys Arg Lys Cys Asp Lys Pro
145         150              155              160

Arg Arg

<210> 61
<211> 150
<212> PRT
<213> Artificial/Unknown

<220>
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&lt;222&gt; {}..()

&lt;223&gt; Synthetic

&lt;400&gt; 61

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Lys Lys Lys  
 130 135 140

Cys Asp Lys Pro Arg Arg  
 145 150

&lt;210&gt; 62

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Artificial/Unknown

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; {}..()

&lt;223&gt; Synthetic

&lt;400&gt; 62

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
65 70 75 80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
85 90 95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
100 105 110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
115 120 125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Lys Lys Lys  
130 135 140

Lys Lys Lys Lys Cys Asp Lys Pro Arg Arg  
145 150

<210> 63

<211> 7

<212> PRT

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Synthetic

<400> 63

Gly Gly Gly Ser Ser Ser  
1 5

<210> 64

<211> 4

<212> PRT

<213> Artificial/Unknown

<220>

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<222> ()..()

<223> Synthetic

<400> 64

Ile Glu Gly Arg  
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<210> 65

<211> 9

<212> PRT

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Synthetic

<400> 65

Pro Gly Ile Ser Gly Gly Gly Gly  
1 5

<210> 66  
<211> 15  
<212> PRT  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Synthetic

<400> 66

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
1 5 10 15

<210> 67  
<211> 13  
<212> PRT  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Synthetic

<400> 67

Glu Gly Lys Ser Ser Gly Ser Gly Ser Glu Lys Glu Phe  
1 5 10

<210> 68  
<211> 26  
<212> PRT  
<213> Homo sapiens

<400> 68

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
1 5 10 15

Val Leu His His Ala Lys Trp Ser Gln Ala  
20 25

<210> 69  
<211> 33  
<212> DNA  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> Synthetic

<400> 69  
cgcggtatccca ccatgaactt tctgctgtct tgg

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<210> 70
<211> 39
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

<400> 70
ctaaatgggt tctcttcttc cccgcctcgg ctgtgcaca 39

<210> 71
<211> 39
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

<400> 71
tgtgacaagc ctgaggcggg aggaagagaa accatttag 39

<210> 72
<211> 28
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

<400> 72
cgcggaatcct caaaaatcta aaggtcga 28

<210> 73
<211> 1107
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

<400> 73
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gtctatcagc gcagctactg ccatccaatc gagaccttg tggacatctt ccaggagtac 120

cctgatgaga tcgagtacat cttcaagcca atgaactttc tgctgtcttg ggtgcattgg 180

agccttgctt tgctgtctta cctccaccat gccaaagtgg cccagtcctg tgtgccctg 240

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atcgatgcgc gggcgctgctg caatgacgag ggcctggagt gtgtgcccac tgaggagtcc 300  
 aacatcacca tgcagattat gcggatcaaa cctcaccaag gccagcacat aggagagatg 360  
 agcttcctac agcacaacaa atgtgaatgc agaccaaaga aagatagagc aagacaagaa 420  
 aaatgtgaca agccgaggcg ggaggaagag aaaccattta gagactgtgc agatgtatat 480  
 caagctgggtt ttaataaaaag tggaatctac actatttata ttaataatat gccagaaccc 540  
 aaaaagtggt tttgcaatat ggatgtcaat gggggagggtt ggactgtaat acaacatcgt 600  
 gaagatggaa gtctagattt ccaaagaggc tggaaggaaat ataaaatggg ttttggaat 660  
 ccctccggcg aatattggct ggggaatgag tttatttttg ccattaccag tcagaggcag 720  
 tacatgctaa gaattgagtt aatggactgg gaagggaacc gagcctattc acagtatgac 780  
 agattccaca taggaaatga aaagcaaac tataggttgt atttaaaagg tcacactggg 840  
 acagcaggaa aacagagcag cctgatctta cagggtgctg atttcagcac taaagatgct 900  
 gataatgaca actgtatgtg caaatgtgcc ctcatgttaa caggaggatg gtggtttgat 960  
 gcttgtggcc cctccaatct aaatggaaat ttctatactg cgggacaaaa ccatggaaaa 1020  
 ctgaatggga taaagtggca ctacttcaaa gggccagtt actccttacg ttccacaact 1080  
 atgatgattc gacctttaga tttttga 1107

<210> 74  
 <211> 368  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 74

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15  
 Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30  
 Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45  
 Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60  
 Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80  
 Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95



Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110  
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125  
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
 130 135 140  
 Pro Arg Arg Glu Glu Glu Lys Pro Phe Arg Asp Cys Ala Asp Val Tyr  
 145 150 155 160  
 Gln Ala Gly Phe Asn Lys Ser Gly Ile Tyr Thr Ile Tyr Ile Asn Asn  
 165 170 175  
 Met Pro Glu Pro Lys Lys Val Phe Cys Asn Met Asp Val Asn Gly Gly  
 180 185 190  
 Gly Trp Thr Val Ile Gln His Arg Glu Asp Gly Ser Leu Asp Phe Gln  
 195 200 205  
 Arg Gly Trp Lys Glu Tyr Lys Met Gly Phe Gly Asn Pro Ser Gly Glu  
 210 215 220  
 Tyr Trp Leu Gly Asn Glu Phe Ile Phe Ala Ile Thr Ser Gln Arg Gln  
 225 230 235 240  
 Tyr Met Leu Arg Ile Glu Leu Met Asp Trp Glu Gly Asn Arg Ala Tyr  
 245 250 255  
 Ser Gln Tyr Asp Arg Phe His Ile Gly Asn Glu Lys Gln Asn Tyr Arg  
 260 265 270  
 Leu Tyr Leu Lys Gly His Thr Gly Thr Ala Gly Lys Gln Ser Ser Leu  
 275 280 285  
 Ile Leu His Gly Ala Asp Phe Ser Thr Lys Asp Ala Asp Asn Asp Asn  
 290 295 300  
 Cys Met Cys Lys Cys Ala Leu Met Leu Thr Gly Gly Trp Trp Phe Asp  
 305 310 315 320  
 Ala Cys Gly Pro Ser Asn Leu Asn Gly Met Phe Tyr Thr Ala Gly Gln  
 325 330 335  
 Asn His Gly Lys Leu Asn Gly Ile Lys Trp His Tyr Phe Lys Gly Pro  
 340 345 350  
 Ser Tyr Ser Leu Arg Ser Thr Thr Met Met Ile Arg Pro Leu Asp Phe  
 355 360 365

<210> 75  
 <211> 39  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
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<210>  76
<211>  39
<212>  DNA
<213>  Artificial/Unknown

<220>
<221>  misc_feature
<222>  {}..{}
<223>  Synthetic

<400>  76
tgtgacaagc cgaggcggca atttgccgcg gagtgcaaa      39

<210>  77
<211>  28
<212>  DNA
<213>  Artificial/Unknown

<220>
<221>  misc_feature
<222>  {}..{}
<223>  Synthetic

<400>  77
cgcggtacct taatccagca tcttctcc      28

<210>  78
<211>  669
<212>  DNA
<213>  Artificial/Unknown

<220>
<221>  misc_feature
<222>  {}..{}
<223>  Synthetic

<400>  78
atgaactttc tgctgtcttg ggtgcattgg agccttgcct tgctgctcta cctccaccat      60
gccaaagtggc cccagggtgc acccatggca gaaggaggag ggcagaatca tcacgaagtg      120
gtgaagttca tggatgtcta tcagcgcagc tactgccatc caatcgagac cctggtggac      180
atcttcacag agtacctga tgagatcgag tacatcttca agccatcctg tgtgccctg      240
atgcgatgcg ggggctgctg caatgacgag ggccctggagt gtgtgcccac tgaggagtcc      300
aacatcacca tgcagattat gcggtatcaa cctcaccagg gccagcacat aggagagatg      360
agcttctcac agcacaacaa atgtgaatgc agaccaaga aagatagagc aagacaagaa      420
aaatgtgaca agccgaggcg gcaatttggc gcggagtgca aataccagtt ccaggcctgg      480

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ggagaatgtg acctgaacac agccctgaag accagaactg gaagtctgaa gcgagccctg 540  
 cacaatgccg aatgccagaa gactgtcacc atctccaagc cctgtggcaa actgaccaag 600  
 cccaaacctc aagcagaatc taagaagaag aaaaaggaag gcaagaaaca ggagaagatg 660  
 ctggattaa 669

<210> 79  
 <211> 222  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 79

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15  
 Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30  
 Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45  
 Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60  
 Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80  
 Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95  
 Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110  
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125  
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
 130 135 140  
 Pro Arg Arg Gln Phe Gly Ala Glu Cys Lys Tyr Gln Phe Gln Ala Trp  
 145 150 155 160  
 Gly Glu Cys Asp Leu Asn Thr Ala Leu Lys Thr Arg Thr Gly Ser Leu  
 165 170 175  
 Lys Arg Ala Leu His Asn Ala Glu Cys Gln Lys Thr Val Thr Ile Ser  
 180 185 190  
 Lys Pro Cys Gly Lys Leu Thr Lys Pro Lys Pro Gln Ala Glu Ser Lys  
 195 200 205

Lys Lys Lys Lys Glu Gly Lys Lys Gln Glu Lys Met Leu Asp  
 210 215 220

<210> 80  
 <211> 37  
 <212> DNA  
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<220>  
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<210> 81  
 <211> 37  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 81  
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<210> 82  
 <211> 27  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 82  
 cgcggatccc tagtccttcc ccttccc 27

<210> 83  
 <211> 639  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
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 <223> Synthetic

<400> 83  
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 gccaaagtgt cccaggctgc acccatggca gaaggaggag ggcagaatca tcacgaagtg 120  
 gtgaagtcca tggatgtcta tcagcgcagc tactgccatc caatcgagac cctgggtggac 180

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atcttccagg agtaccctga tgagatcgag tacatcttca agccatcctg tgtgccctg      240
atgcgatgcg ggggctgctg caatgacgag ggcctggagt gtgtgcccac tgaggagtcc      300
aacatcacca tgcagattat gcggatcaaa cctcaccaag gccagacatc aggagagatg      360
agcttcttac agcacaacaa atgtgaatgc agaccaaga aagatagagc aagacaagaa      420
aaatgtgaca agccgaggcg ggagtttgga gccgactgca agtacaagtt tgaagaactgg      480
ggtgcgtgtg atgggggac aggcacaaaa gtccgccaag gcaccctgaa gaagggcgcg      540
tacaatgctc agtgccagga gaccatccgc gtcaccaagc cctgcacccc caagacaaa      600
gcaaaggcca aagccaagaa agggaaggga aaggactag                                639

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&lt;210&gt; 84

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Artificial/Unknown

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; ()..()

&lt;223&gt; Synthetic

&lt;400&gt; 84

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Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu
1                               5                               10          15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly
                20                25                30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
35                40                45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu
50                55                60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu
65                70                75                80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro
85                90                95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His
100               105               110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys
115               120               125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys
130               135               140

Pro Arg Arg Glu Phe Gly Ala Asp Cys Lys Tyr Lys Phe Glu Asn Trp
145               150               155               160

Gly Ala Cys Asp Gly Gly Thr Gly Thr Lys Val Arg Gln Gly Thr Leu

```

	165	170	175
--	-----	-----	-----

Lys Lys Ala Arg Tyr Asn Ala Gln Cys Gln Glu Thr Ile Arg Val Thr  
                   180                  185                  190

Lys Pro Cys Thr Pro Lys Thr Lys Ala Lys Ala Lys Ala Lys Lys Gly  
                   195                  200                  205

Lys Gly Lys Asp  
           210

<210> 85  
 <211> 36  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 85  
 ccatggggccc gacgggttcc gcctcgggtt gtcaca 36

<210> 86  
 <211> 36  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 86  
 tgtgacaagc cgaggcggaa gccgtcgggc ccatgg 36

<210> 87  
 <211> 28  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 87  
 cgcggatcct tagtggaagg tgttgggg 28

<210> 88  
 <211> 1116  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

```

<400> 88
atgaactttc tgctgtcttg ggtgcattgg agccttgcct tgctgtcteta cctccaccat 60
gccaaagtgt cccaggctgc acccatggca gaaggaggag ggcagaatca tcacgaagtg 120
gtgaagtcca tggatgtcta tcagcgagc tactgcccac caatcgagac cctggtggac 180
atcttcacag agtaccctga tgagatcgag tacatctcca agccatcctg tgtgccctg 240
atgcatgagc ggggctgctg caatgacgag ggcctggagt gtgtgcccac tgaggagtcc 300
aacatcacca tgcagattat gcggtcctaa cctcaccaag gccagcacat aggagagatg 360
agcttcctac agcacaacaa atgtgaatgc agaccaaaga aagatagagc aagacaagaa 420
aaatgtgaca agccgaggcg gaagccgtcg ggcccatgga gagactgcct gcaggccctg 480
gaggatggcc acgacaccag ctccatctac ctggtgaagc cgagaacac caaccgcctc 540
atgcaggtgt ggtgcgacca gagacacgac cccgggggct ggaccgtcat ccagagagcg 600
ctggatggct ctgttaactt cttcaggaac tgggagacgt acaagcaagg gtttgggaac 660
attgatggcg aatactggct gggcctggag aacatttact ggctgacgaa ccaaggcaac 720
tacaaaactcc tggtgacctt ggaggactgg tccggccgca aagtctttgc agaatacgcc 780
agtttccgcc tggaacctga gagcgagtat tataagctgc ggctggggcg ctaccatggc 840
aatgcgggtg actcctttac atggcacaac ggcaagcagt tcaccacccct ggacagagat 900
catgatgtct acacaggaaa ctgtgccac taccagaagg gaggctggtg gtaatacgcc 960
tgtgcccact ccaacctcaa cggggtctgg taccgcgggg gccattaccg gagccgctac 1020
caggacggag tctactgggc tgagtccga ggaggctctt actcactcaa gaaagtgggt 1080
atgatgatcc gaccgaaccc caacaccttc cactaa 1116

```

```

<210> 89
<211> 371
<212> PRT
<213> Artificial/Unknown

```

```

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

```

```
<400> 89
```

```
Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu
1 5 10 15
```

```
Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly
20 25 30
```

```
Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
```

35	40	45
Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu 50 55 60		
Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu 65 70 75 80		
Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro 85 90 95		
Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His 100 105 110		
Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys 115 120 125		
Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys 130 135 140		
Pro Arg Arg Lys Pro Ser Gly Pro Trp Arg Asp Cys Leu Gln Ala Leu 145 150 155 160		
Glu Asp Gly His Asp Thr Ser Ser Ile Tyr Leu Val Lys Pro Glu Asn 165 170 175		
Thr Asn Arg Leu Met Gln Val Trp Cys Asp Gln Arg His Asp Pro Gly 180 185 190		
Gly Trp Thr Val Ile Gln Arg Arg Leu Asp Gly Ser Val Asn Phe Phe 195 200 205		
Arg Asn Trp Glu Thr Tyr Lys Gln Gly Phe Gly Asn Ile Asp Gly Glu 210 215 220		
Tyr Trp Leu Gly Leu Glu Asn Ile Tyr Trp Leu Thr Asn Gln Gly Asn 225 230 235 240		
Tyr Lys Leu Leu Val Thr Met Glu Asp Trp Ser Gly Arg Lys Val Phe 245 250 255		
Ala Glu Tyr Ala Ser Phe Arg Leu Glu Pro Glu Ser Glu Tyr Tyr Lys 260 265 270		
Leu Arg Leu Gly Arg Tyr His Gly Asn Ala Gly Asp Ser Phe Thr Trp 275 280 285		
His Asn Gly Lys Gln Phe Thr Thr Leu Asp Arg Asp His Asp Val Tyr 290 295 300		
Thr Gly Asn Cys Ala His Tyr Gln Lys Gly Gly Trp Trp Tyr Asn Ala 305 310 315 320		
Cys Ala His Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr 325 330 335		
Arg Ser Arg Tyr Gln Asp Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly 340 345 350		



Ser Tyr Ser Leu Lys Lys Val Val Met Met Ile Arg Pro Asn Pro Asn  
 355 360 365

Thr Phe His  
 370

<210> 90  
 <211> 36  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 90  
 gaatgggtcct tcattgatcc gcctcgggctt gtcaca 36

<210> 91  
 <211> 36  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 91  
 tgtgacaagc cgaggcggat caatgaagga ccattc 36

<210> 92  
 <211> 29  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 92  
 cgcggatcct cagtcaatag gcttgatca 29

<210> 93  
 <211> 1104  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic

<400> 93  
 atgaacttcc tgctgtcttg ggtgcattgg agccttgccct tgctgtcteta cctccaccat 60

gccaaagtgt cccaggctgc acccatggca gaaggaggag ggcagaatca tcacgaagtg 120

```

gtgaagttca tggatgtcta tcagcgcagc tactgccatc caatcgagac cctggtggac 180
atcttcocagg agtaccctga tgagatcgag tacatcttca agccatcctg tgtgccctcg 240
atgcgatgcg ggggctgctg caatgacgag ggccctggagt gtgtgccac tgaggagtcc 300
aacatcacca tgcagattat gcgcatcaaa cctcaccaag gccagcacat aggagagatg 360
agcttcctac agcacaacaa atgtgaatgc agaccaaaga aagatagagc aagacaagaa 420
aaatgtgaca agccgaggcg gatcaatgaa ggaccattca aagactgtca gcaagcaaaa 480
gaagctgggc attcggtcag tgggatttat atgattaaac ctgaaaacag caatggacca 540
atgcagttat ggtgtgaaaa cagtttggac cctggggggt ggactgttat tcagaaaaga 600
acagacggct ctgtcaactt cttcagaaat tgggaaaatt ataagaaagg gtttggaac 660
attgacggag aatactggct tggactggaa aatatctata tgcttagcaa tcaagataat 720
tacaagttat tgattgaatt agaagactgg agtgataaaa aagtctatgc agaatacagc 780
agctttctgc tggaacctga aagtgaattc tatagactgc gcctgggaac ttaccaggga 840
aatgcagggg attctatgat gtggcataat ggtaaacat tcaccacact ggacagagat 900
aaagatatgt atgcaggaaa ctgcccacac ttccataaag gaggtcgtgt gtacaatgcc 960
tgtgcacatt ctaacctaaa tggagtatgg tacagaggag gccattacag aagcaagcac 1020
caagatggaa ttttctgggc cgaatacaga ggccgggtcat actccttaag agcagttcag 1080
atgatgatca agcctattga ctga 1104

```

&lt;210&gt; 94

&lt;211&gt; 367

&lt;212&gt; PRT

&lt;213&gt; Artificial/Unknown

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; ()..()

&lt;223&gt; Synthetic

&lt;400&gt; 94

```

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu
1          5          10          15

```

```

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly
          20          25          30

```

```

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
          35          40          45

```

```

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu
          50          55          60

```

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80  
 Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95  
 Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110  
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125  
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
 130 135 140  
 Pro Arg Arg Ile Asn Glu Gly Pro Phe Lys Asp Cys Gln Gln Ala Lys  
 145 150 155 160  
 Glu Ala Gly His Ser Val Ser Gly Ile Tyr Met Ile Lys Pro Glu Asn  
 165 175  
 Ser Asn Gly Pro Met Gln Leu Trp Cys Glu Asn Ser Leu Asp Pro Gly  
 180 185 190  
 Gly Trp Thr Val Ile Gln Lys Arg Thr Asp Gly Ser Val Asn Phe Phe  
 195 200 205  
 Arg Asn Trp Glu Asn Tyr Lys Lys Gly Phe Gly Asn Ile Asp Gly Glu  
 210 215 220  
 Tyr Trp Leu Gly Leu Glu Asn Ile Tyr Met Leu Ser Asn Gln Asp Asn  
 225 230 235 240  
 Tyr Lys Leu Leu Ile Glu Leu Glu Asp Trp Ser Asp Lys Lys Val Tyr  
 245 250 255  
 Ala Glu Tyr Ser Ser Phe Arg Leu Glu Pro Glu Ser Glu Phe Tyr Arg  
 260 265 270  
 Leu Arg Leu Gly Thr Tyr Gln Gly Asn Ala Gly Asp Ser Met Met Trp  
 275 280 285  
 His Asn Gly Lys Gln Phe Thr Thr Leu Asp Arg Asp Lys Asp Met Tyr  
 290 295 300  
 Ala Gly Asn Cys Ala His Phe His Lys Gly Gly Trp Trp Tyr Asn Ala  
 305 310 315 320  
 Cys Ala His Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr  
 325 330 335  
 Arg Ser Lys His Gln Asp Gly Ile Phe Trp Ala Glu Tyr Arg Gly Gly  
 340 345 350  
 Ser Tyr Ser Leu Arg Ala Val Gln Met Met Ile Lys Pro Ile Asp  
 355 360 365

&lt;210&gt; 95

&lt;211&gt; 1387

<212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<220>  
 <221> misc\_feature  
 <222> (1201)..(1219)  
 <223> "n" may be any nucleotide

<220>  
 <221> misc\_feature  
 <222> (1295)..(1324)  
 <223> "n" may be any nucleotide

<400> 95  
 atgtggcaga ttgttttctt tactctgagc tgtgatcttg tcttggccgc agcctataac 60  
 aacttttcgga agagcatgga cagcatagga aagaagcaat atcaggtcca gcatgggtcc 120  
 tgcagctaca ctttcctcct gccagagatg gacaactgcc gctcttcctc cagccctac 180  
 gtgtccaatg ctgtgcagag ggacgcgcgc ctcgaatacg atgactcggg cgagaggctg 240  
 caagtgtcgg agaacatcat gaaaaacaac actcagtggc taatgaaggt agagaatata 300  
 tcccaggaca acatgaagaa agaaatggta gagatacagc agaatgcagt acagaaccag 360  
 acggctgtga tgatagaaat agggacaaac ctgttgaacc aaacagcgga gcaaacgcgg 420  
 aagttaactg atgtggaagc ccaagtatta aatcagacca cgagacttga acttcagctc 480  
 ttggaacct cctctcgac aaacaaattg gaaaaacaga ttttggacca gaccagtga 540  
 ataaacaat tgcaagataa gaacagtttc ctagaaaaga agtgctagc tatggaagac 600  
 aagcacatca tccaactaca gtcaataaaa gaagagaaag atcagctaca ggtgttagta 660  
 tccaagcaga attccatcat tgaagaactc gaaaaaaaaa tagtgactgc cagcgtgaat 720  
 aattcagttc ttcagaagca gcaacatgat ctcatggaga cagttaataa ctactgact 780  
 atgatgtcca catcaaagc agctaaggac cccactgttg ctaaaagaaga acaaatcagc 840  
 ttcagagact gtgctgaagt attcaaatca ggacacacca cgaatggcat ctacacgtta 900  
 acattcccta attctacaga agagatcaag gctactctgt acatggaagc tggaggaggc 960  
 ggggtggcaa ttattcagcg acgtgaggat ggcagcgttg catttcagag gacttggaaa 1020  
 gaatataaag tgggatttgg taacctctca gaaaaatatt ggctgggaaa tgagtttgtt 1080  
 tcgcaactga ctaatcagca acgctatgtg cttaaaatac acctaaaga ctgggaaggg 1140  
 aatgaggctt actcattgta tgaacatttc tatctctcaa gtgaagaact caattatag 1200

```

nnnnnnnnnn nnnnnnnnnn gcaatgattt tagcacaagg gatggagcca cgcncanaty 1260
tatttgcaaa tggtcacaaa tgctaacagn aggtnnnnnnn nnnnnnnnnn nnnnnnnnnn 1320
nnnntactgg aaaggetcag gctattcgct caaggccaca accatgatga tcgcaccagc 1380
agatttc 1387

```

```

<210> 96
<211> 360
<212> PRT
<213> Artificial/Unknown

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<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

```

```

<220>
<221> misc_feature
<222> {269}..(272)
<223> "Xaa" may be any amino acid

```

```

<400> 96

```

```

Met Trp Gln Ile Val Phe Phe Thr Leu Ser Cys Asp Leu Val Leu Ala
1 5 10 15

```

```

Ala Ala Tyr Asn Asn Phe Arg Lys Ser Met Asp Ser Ile Gly Lys Lys
20 25 30

```

```

Gln Tyr Gln Val Gln His Gly Ser Cys Ser Tyr Thr Phe Leu Leu Pro
35 40 45

```

```

Glu Met Asp Asn Cys Arg Ser Ser Ser Ser Pro Tyr Val Ser Asn Ala
50 55 60

```

```

Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Asp Ser Val Gln Arg Leu
65 70 75 80

```

```

Gln Val Leu Glu Asn Ile Met Glu Asn Asn Thr Gln Trp Leu Met Lys
85 90 95

```

```

Leu Glu Asn Ile Ser Gln Asp Asn Met Lys Lys Glu Met Val Glu Ile
100 105 110

```

```

Gln Gln Asn Ala Val Gln Asn Gln Thr Ala Val Met Ile Glu Ile Gly
115 120 125

```

```

Thr Asn Leu Leu Asn Gln Thr Ala Glu Gln Thr Arg Lys Leu Thr Asp
130 135 140

```

```

Val Glu Ala Gln Val Ser Asn Ala Thr Thr Arg Leu Glu Leu Gln Leu
145 150 155 160

```

```

Leu Glu His Ser Leu Ser Thr Asn Lys Leu Glu Lys Gln Ile Leu Asp
165 170 175

```

```

Gln Thr Ser Glu Ile Asn Lys Leu Gln Asp Lys Asn Ser Phe Leu Glu

```

180 185 190  
 Lys Lys Val Leu Ala Met Glu Asp Lys His Ile Ile Gln Leu Gln Ser  
 195 200 205  
 Ile Lys Glu Glu Lys Asp Gln Leu Gln Val Leu Val Ser Lys Gln Asn  
 210 215 220  
 Ser Ile Ile Glu Glu Leu Glu Lys Lys Ile Val Thr Ala Thr Val Asn  
 225 230 235 240  
 Asn Ser Val Leu Gln Lys Gln Gln His Asp Leu Met Glu Thr Val Asn  
 245 250 255  
 Asn Leu Leu Thr Met Met Ser Thr Ser Asn Cys Lys Xaa Xaa Xaa Xaa  
 260 265 270  
 Val Ala Lys Glu Glu Gln Ile Ser Phe Arg Asp Cys Ala Glu Val Phe  
 275 280 285  
 Lys Ser Gly His Thr Thr Asn Gly Ile Tyr Thr Leu Met Trp Gln Ile  
 290 295 300  
 Val Phe Phe Thr Leu Ser Cys Asp Leu Val Leu Ala Ala Tyr Asn  
 305 310 315 320  
 Asn Phe Arg Lys Ser Met Asp Ser Ile Gly Lys Lys Gln Tyr Gln Val  
 325 330 335  
 Gln His Gly Ser Cys Ser Tyr Thr Phe Leu Leu Pro Glu Met Asp Asn  
 340 345 350  
 Cys Arg Ser Ser Ser Ser Pro Tyr  
 355 360  
 <210> 97  
 <211> 339  
 <212> PRT  
 <213> Artificial/Unknown  
 <220>  
 <221> misc\_feature  
 <222> {}..{}  
 <223> Synthetic  
 <400> 97  
 Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
 1 5 10 15  
 Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
 20 25 30  
 Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45  
 Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80  
 Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95  
 Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110  
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125  
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
 130 135 140  
 Pro Arg Arg Met Pro Glu Pro Lys Lys Val Phe Cys Asn Met Asp Val  
 145 150 155 160  
 Asn Gly Gly Gly Trp Thr Val Ile Gln His Arg Glu Asp Gly Ser Leu  
 165 170 175  
 Asp Phe Gln Arg Gly Trp Lys Glu Tyr Lys Met Gly Phe Gly Asn Pro  
 180 185 190  
 Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Ile Phe Ala Ile Thr Ser  
 195 200 205  
 Gln Arg Gln Tyr Met Leu Arg Ile Glu Leu Met Asp Trp Glu Gly Asn  
 210 215 220  
 Arg Ala Tyr Ser Gln Tyr Asp Arg Phe His Ile Gly Asn Glu Lys Gln  
 225 230 235 240  
 Asn Tyr Arg Leu Tyr Leu Lys Gly His Thr Gly Thr Ala Gly Lys Gln  
 245 250 255  
 Ser Ser Leu Ile Leu His Gly Ala Asp Phe Ser Thr Lys Asp Ala Asp  
 260 265 270  
 Asn Asp Asn Cys Met Cys Lys Cys Ala Leu Met Leu Thr Gly Gly Trp  
 275 280 285  
 Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly Met Phe Tyr Thr  
 290 295 300  
 Ala Gly Gln Asn His Gly Lys Leu Asn Gly Ile Lys Trp His Tyr Phe  
 305 310 315 320  
 Lys Gly Pro Ser Tyr Ser Leu Arg Ser Thr Thr Met Met Ile Arg Pro  
 325 330 335  
 Leu Asp Phe  
 <210> 98  
 <211> 361  
 <212> DNA  
 <213> Artificial/Unknown  
 <220>

&lt;221&gt; misc\_feature

&lt;222&gt; ( )..( )

&lt;223&gt; Synthetic

&lt;400&gt; 98

gtccaatgct gtgcagaggg acgcgccgct cgaatacgat gactcgggtc agaggtgtgca 60

agtgtctggag aacatcatgg aaaacaacac tcagttggcta atgaaggtag agaatatatc 120

ccaggacaac atgaagaaag aaatggtaga gatacagcag aatgcagtac agaaccagac 180

ggctgtgatg atagaaatag ggacaaacct gttgaaccaa acagcggagc aaacgcggaa 240

gttaactgat gtggaagccc aagtattaaa tcagaccacg agacttgaac ttcagctott 300

ggaacactcc ctctgcacaa acaaatgga aaaacagatt ttggaccaga ccagtgaat 360

a 361

&lt;210&gt; 99

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Artificial/Unknown

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; ( )..( )

&lt;223&gt; Synthetic

&lt;400&gt; 99

Val Ser Asn Ala Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Asp Ser  
1 5 10 15Val Gln Arg Leu Gln Val Leu Glu Asn Ile Met Glu Asn Asn Thr Gln  
20 25 30Trp Leu Met Lys Leu Glu Asn Ile Ser Gln Asp Asn Met Lys Lys Glu  
35 40 45Met Val Glu Ile Gln Gln Asn Ala Val Gln Asn Gln Thr Ala Val Met  
50 55 60Ile Glu Ile Gly Thr Asn Leu Leu Asn Gln Thr Ala Glu Gln Thr Arg  
65 70 75 80Lys Leu Thr Asp Val Glu Ala Gln Val Ser Asn Ala Thr Thr Arg Leu  
85 90 95Glu Leu Gln Leu Leu Glu His Ser Leu Ser Thr Asn Lys Leu Glu Lys  
100 105 110Gln Ile Leu Asp Gln Thr Ser Glu Ile Asn Lys  
115 120

&lt;210&gt; 100

&lt;211&gt; 462

&lt;212&gt; PRT

&lt;213&gt; Artificial/Unknown



<220>  
 <221> misc\_feature  
 <222> ( )..()  
 <223> Synthetic

<400> 100

Val	Ser	Asn	Ala	Val	Gln	Arg	Asp	Ala	Pro	Leu	Glu	Tyr	Asp	Asp	Ser
1				5					10					15	
Val	Gln	Arg	Leu	Gln	Val	Leu	Glu	Asn	Ile	Met	Glu	Asn	Asn	Thr	Gln
			20					25					30		
Trp	Leu	Met	Lys	Leu	Glu	Asn	Ile	Ser	Gln	Asp	Asn	Met	Lys	Lys	Glu
		35					40					45			
Met	Val	Glu	Ile	Gln	Gln	Asn	Ala	Val	Gln	Asn	Gln	Thr	Ala	Val	Met
		50				55					60				
Ile	Glu	Ile	Gly	Thr	Asn	Leu	Leu	Asn	Gln	Thr	Ala	Glu	Gln	Thr	Arg
65					70				75					80	
Lys	Leu	Thr	Asp	Val	Glu	Ala	Gln	Val	Ser	Asn	Ala	Thr	Thr	Arg	Leu
				85				90						95	
Glu	Leu	Gln	Leu	Leu	Glu	His	Ser	Leu	Ser	Thr	Asn	Lys	Leu	Glu	Lys
			100					105					110		
Gln	Ile	Leu	Asp	Gln	Thr	Ser	Glu	Ile	Asn	Lys	Met	Asn	Phe	Leu	Leu
			115				120					125			
Ser	Trp	Val	His	Trp	Ser	Leu	Ala	Leu	Leu	Leu	Tyr	Leu	His	His	Ala
	130					135					140				
Lys	Trp	Ser	Gln	Ala	Ala	Pro	Met	Ala	Glu	Gly	Gly	Gln	Asn	His	
145					150					155				160	
His	Glu	Val	Val	Lys	Phe	Met	Asp	Val	Tyr	Gln	Arg	Ser	Tyr	Cys	His
				165					170					175	
Pro	Ile	Glu	Thr	Leu	Val	Asp	Ile	Phe	Gln	Glu	Tyr	Pro	Asp	Glu	Ile
			180					185					190		
Glu	Tyr	Ile	Phe	Lys	Pro	Ser	Cys	Val	Pro	Leu	Met	Arg	Cys	Gly	Gly
		195					200					205			
Cys	Cys	Asn	Asp	Glu	Gly	Leu	Glu	Cys	Val	Pro	Thr	Glu	Glu	Ser	Asn
		210				215						220			
Ile	Thr	Met	Gln	Ile	Met	Arg	Ile	Lys	Pro	His	Gln	Gly	Gln	His	Ile
225					230					235				240	
Gly	Glu	Met	Ser	Phe	Leu	Gln	His	Asn	Lys	Cys	Glu	Cys	Arg	Pro	Lys
				245					250					255	
Lys	Asp	Arg	Ala	Arg	Gln	Glu	Lys	Cys	Asp	Lys	Pro	Arg	Arg	Met	Pro
			260					265						270	

Glu Pro Lys Lys Val Phe Cys Asn Met Asp Val Asn Gly Gly Gly Trp  
           275                          280                          285  
 Thr Val Ile Gln His Arg Glu Asp Gly Ser Leu Asp Phe Gln Arg Gly  
           290                          295                          300  
 Trp Lys Glu Tyr Lys Met Gly Phe Gly Asn Pro Ser Gly Glu Tyr Trp  
   305                          310                          315                          320  
 Leu Gly Asn Glu Phe Ile Phe Ala Ile Thr Ser Gln Arg Gln Tyr Met  
                           325                          330                          335  
 Leu Arg Ile Glu Leu Met Asp Trp Glu Gly Asn Arg Ala Tyr Ser Gln  
                           340                          345                          350  
 Tyr Asp Arg Phe His Ile Gly Asn Glu Lys Gln Asn Tyr Arg Leu Tyr  
                           355                          360                          365  
 Leu Lys Gly His Thr Gly Thr Ala Gly Lys Gln Ser Ser Leu Ile Leu  
                           370                          375                          380  
 His Gly Ala Asp Phe Ser Thr Lys Asp Ala Asp Asn Asp Asn Cys Met  
   385                          390                          395                          400  
 Cys Lys Cys Ala Leu Met Leu Thr Gly Gly Trp Trp Phe Asp Ala Cys  
                           405                          410                          415  
 Gly Pro Ser Asn Leu Asn Gly Met Phe Tyr Thr Ala Gly Gln Asn His  
                           420                          425                          430  
 Gly Lys Leu Asn Gly Ile Lys Trp His Tyr Phe Lys Gly Pro Ser Tyr  
                           435                          440                          445  
 Ser Leu Arg Ser Thr Thr Met Met Ile Arg Pro Leu Asp Phe  
                           450                          455                          460  
  
 <210> 101  
 <211> 224  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 101  
  
 Lys Pro Ser Gly Pro Trp Arg Asp Cys Leu Gln Ala Leu Glu Asp Gly  
   1                          5                          10                          15  
 His Asp Thr Ser Ser Ile Tyr Leu Val Lys Pro Glu Asn Thr Asn Arg  
           20                          25                          30  
 Leu Met Gln Val Trp Cys Asp Gln Arg His Asp Pro Gly Gly Trp Thr  
   35                          40                          45  
 Val Ile Gln Arg Arg Leu Asp Gly Ser Val Asn Phe Phe Arg Asn Trp  
   50                          55                          60  
 Glu Thr Tyr Lys Gln Gly Phe Gly Asn Ile Asp Gly Glu Tyr Trp Leu  
   65                          70                          75                          80  
 Gly Leu Glu Asn Ile Tyr Trp Leu Thr Asn Gln Gly Asn Tyr Lys Leu

85 90 95  
 Leu Val Thr Met Glu Asp Trp Ser Gly Arg Lys Val Phe Ala Glu Tyr  
 100 105 110  
 Ala Ser Phe Arg Leu Glu Pro Glu Ser Glu Tyr Tyr Lys Leu Arg Leu  
 115 120 125  
 Gly Arg Tyr His Gly Asn Ala Gly Asp Ser Phe Thr Trp His Asn Gly  
 130 135 140  
 Lys Gln Phe Thr Thr Leu Asp Arg Asp His Asp Val Tyr Thr Gly Asn  
 145 150 155 160  
 Cys Ala His Tyr Gln Lys Gly Gly Trp Trp Tyr Asn Ala Cys Ala His  
 165 170 175  
 Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Arg  
 180 185 190  
 Tyr Gln Asp Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly Ser Tyr Ser  
 195 200 205  
 Leu Lys Lys Val Val Met Met Ile Arg Pro Asn Pro Asn Thr Phe His  
 210 215 220  
 <210> 102  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens  
 <400> 102  
 Ile Asn Glu Gly Pro Phe Lys Asp Cys Gln Gln Ala Lys Glu Ala Gly  
 1 5 10 15  
 His Ser Val Ser Gly Ile Tyr Met Ile Lys Pro Glu Asn Ser Asn Gly  
 20 25 30  
 Pro Met Gln Leu Trp Cys Glu Asn Ser Leu Asp Pro Gly Gly Trp Thr  
 35 40 45  
 Val Ile Gln Lys Arg Thr Asp Gly Ser Val Asn Phe Phe Arg Asn Trp  
 50 55 60  
 Glu Asn Tyr Lys Lys Gly Phe Gly Asn Ile Asp Gly Glu Tyr Trp Leu  
 65 70 75 80  
 Gly Leu Glu Asn Ile Tyr Met Leu Ser Asn Gln Asp Asn Tyr Lys Leu  
 85 90 95  
 Leu Ile Glu Leu Glu Asp Trp Ser Asp Lys Lys Val Tyr Ala Glu Tyr  
 100 105 110  
 Ser Ser Phe Arg Leu Glu Pro Glu Ser Glu Phe Tyr Arg Leu Arg Leu  
 115 120 125  
 Gly Thr Tyr Gln Gly Asn Ala Gly Asp Ser Met Met Trp His Asn Gly  
 130 135 140

Lys Gln Phe Thr Thr Leu Asp Arg Asp Lys Asp Met Tyr Ala Gly Asn  
145 150 155 160

Cys Ala His Phe His Lys Gly Gly Trp Trp Tyr Asn Ala Cys Ala His  
165 170 175

Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Lys  
180 185 190

His Gln Asp Gly Ile Phe Trp Ala Glu Tyr Arg Gly Gly Ser Tyr Ser  
195 200 205

Leu Arg Ala Val Gln Met Met Ile Lys Pro Ile Asp  
210 215 220

<210> 103

<211> 371

<212> PRT

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> Synthetic

<400> 103

Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu  
1 5 10 15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly  
20 25 30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
35 40 45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
50 55 60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
65 70 75 80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
85 90 95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
100 105 110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
115 120 125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
130 135 140

Pro Arg Arg Lys Pro Ser Gly Pro Trp Arg Asp Cys Leu Gln Ala Leu  
145 150 155 160

Glu Asp Gly His Asp Thr Ser Ser Ile Tyr Leu Val Lys Pro Glu Asn

	165		170		175
Thr Asn Arg	Leu Met Gln Val Trp Cys Asp Gln Arg His Asp Pro Gly				
	180		185		190
Gly Trp Thr	Val Ile Gln Arg Arg Leu Asp Gly Ser Val Asn Phe Phe				
	195		200		205
Arg Asn Trp	Glu Thr Tyr Lys Gln Gly Phe Gly Asn Ile Asp Gly Glu				
	210		215		220
Tyr Trp Leu	Gly Leu Glu Asn Ile Tyr Trp Leu Thr Asn Gln Gly Asn				
	225		230		235
Tyr Lys Leu	Leu Val Thr Met Glu Asp Trp Ser Gly Arg Lys Val Phe				
	245		250		255
Ala Glu Tyr	Ala Ser Phe Arg Leu Glu Pro Glu Ser Glu Tyr Tyr Lys				
	260		265		270
Leu Arg Leu	Gly Arg Tyr His Gly Asn Ala Gly Asp Ser Phe Thr Trp				
	275		280		285
His Asn Gly	Lys Gln Phe Thr Thr Leu Asp Arg Asp His Asp Val Tyr				
	290		295		300
Thr Gly Asn	Cys Ala His Tyr Gln Lys Gly Gly Trp Trp Tyr Asn Ala				
	305		310		315
Cys Ala His	Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr				
	325		330		335
Arg Ser Arg	Tyr Gln Asp Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly				
	340		345		350
Ser Tyr Ser	Leu Lys Lys Val Val Met Met Ile Arg Pro Asn Pro Asn				
	355		360		365
Thr Phe His					
	370				
<210>	104				
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<212>	PRT				
<213>	Artificial/Unknown				
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<222>	()..()				
<223>	Synthetic				
<400>	104				
Met Asn Phe	Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu				
	1		5		10
					15
Tyr Leu His	His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly				
	20		25		30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln  
 35 40 45  
 Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu  
 50 55 60  
 Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu  
 65 70 75 80  
 Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro  
 85 90 95  
 Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His  
 100 105 110  
 Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys  
 115 120 125  
 Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys  
 130 135 140  
 Pro Arg Arg Ile Asn Glu Gly Pro Phe Lys Asp Cys Gln Gln Ala Lys  
 145 150 155 160  
 Glu Ala Gly His Ser Val Ser Gly Ile Tyr Met Ile Lys Pro Glu Asn  
 165 170 175  
 Ser Asn Gly Pro Met Gln Leu Trp Cys Glu Asn Ser Leu Asp Pro Gly  
 180 185 190  
 Gly Trp Thr Val Ile Gln Lys Arg Thr Asp Gly Ser Val Asn Phe Phe  
 195 200 205  
 Arg Asn Trp Glu Asn Tyr Lys Lys Gly Phe Gly Asn Ile Asp Gly Glu  
 210 215 220  
 Tyr Trp Leu Gly Leu Glu Asn Ile Tyr Met Leu Ser Asn Gln Asp Asn  
 225 230 235 240  
 Tyr Lys Leu Leu Ile Glu Leu Glu Asp Trp Ser Asp Lys Lys Val Tyr  
 245 250 255  
 Ala Glu Tyr Ser Ser Phe Arg Leu Glu Pro Glu Ser Glu Phe Tyr Arg  
 260 265 270  
 Leu Arg Leu Gly Thr Tyr Gln Gly Asn Ala Gly Asp Ser Met Met Trp  
 275 280 285  
 His Asn Gly Lys Gln Phe Thr Thr Leu Asp Arg Asp Lys Asp Met Tyr  
 290 295 300  
 Ala Gly Asn Cys Ala His Phe His Lys Gly Gly Trp Trp Tyr Asn Ala  
 305 310 315 320  
 Cys Ala His Ser Asn Leu Asn Gly Val Trp Tyr Arg Gly Gly His Tyr  
 325 330 335  
 Arg Ser Lys His Gln Asp Gly Ile Phe Trp Ala Glu Tyr Arg Gly Gly  
 340 345 350

Ser Tyr Ser Leu Arg Ala Val Gln Met Met Ile Lys Pro Ile Asp  
 355 360 365

<210> 105

<211> 53

<212> PRT

<213> Homo sapiens

<400> 105

Lys Leu Glu Asn Tyr Ile Gln Asp Asn Met Lys Lys Glu Met Val Glu  
 1 5 10 15

Ile Gln Gln Asn Ala Val Gln Asn Gln Thr Ala Val Met Ile Glu Ile  
 20 25 30

Gly Thr Asn Leu Leu Asn Gln Thr Ala Glu Gln Thr Arg Lys Leu Thr  
 35 40 45

Asp Val Glu Ala Gln  
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<210> 106

<211> 105

<212> PRT

<213> Homo sapiens

<400> 106

His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg  
 1 5 10 15

Thr Arg Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly  
 20 25 30

Ser Ala Cys Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro  
 35 40 45

Glu Ser Arg Val Asp Pro Glu Val Leu His Ser Leu Gln Thr Gln Leu  
 50 55 60

Lys Ala Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln  
 65 70 75 80

Gln Gln Arg His Leu Glu Lys Gln His Leu Arg Ile Gln His Leu Gln  
 85 90 95

Ser Gln Phe Gly Leu Leu Asp His Lys  
 100 105

<210> 107

<211> 192

<212> PRT

<213> Homo sapiens

<400> 107

Gly Pro Ile Cys Val Asn Thr Lys Gly Gln Asp Ala Ser Thr Ile Lys

1	5					10					15				
Asp	Met	Ile	Thr	Arg	Met	Asp	Leu	Glu	Asn	Leu	Lys	Asp	Val	Leu	Ser
			20					25					30		
Arg	Gln	Lys	Arg	Glu	Ile	Asp	Val	Leu	Gln	Leu	Val	Val	Asp	Val	Asp
		35					40					45			
Gly	Asn	Ile	Val	Asn	Glu	Val	Lys	Leu	Leu	Arg	Lys	Glu	Ser	Arg	Asn
		50				55					60				
Met	Asn	Ser	Arg	Val	Thr	Gln	Leu	Tyr	Met	Gln	Leu	Leu	His	Glu	Ile
65					70					75				80	
Ile	Arg	Lys	Arg	Asp	Asn	Ser	Leu	Glu	Leu	Ser	Gln	Leu	Glu	Asn	Lys
				85					90					95	
Ile	Leu	Asn	Val	Thr	Thr	Glu	Met	Leu	Lys	Met	Ala	Thr	Arg	Tyr	Arg
			100					105					110		
Glu	Leu	Glu	Val	Lys	Tyr	Ala	Ser	Leu	Thr	Asp	Leu	Val	Asn	Asn	Gln
		115					120					125			
Ser	Val	Met	Ile	Thr	Leu	Leu	Glu	Glu	Gln	Cys	Leu	Arg	Ile	Phe	Ser
		130				135					140				
Arg	Gln	Asp	Thr	His	Val	Ser	Pro	Pro	Leu	Val	Gln	Val	Val	Pro	Gln
145					150					155					160
His	Ile	Pro	Asn	Ser	Gln	Gln	Tyr	Thr	Pro	Gly	Leu	Leu	Gly	Gly	Asn
				165					170					175	
Glu	Ile	Gln	Arg	Asp	Pro	Gly	Tyr	Pro	Arg	Asp	Leu	Met	Pro	Pro	Pro
			180					185					190		
<210>	108														
<211>	196														
<212>	PRT														
<213>	Homo sapiens														
<400>	108														
Pro	Tyr	Val	Ser	Asn	Ala	Val	Gln	Arg	Asp	Ala	Pro	Leu	Glu	Tyr	Asp
1				5					10					15	
Asp	Ser	Val	Gln	Arg	Leu	Gln	Val	Leu	Glu	Asn	Ile	Met	Glu	Asn	Asn
			20					25					30		
Thr	Gln	Trp	Leu	Met	Lys	Leu	Glu	Asn	Tyr	Ile	Gln	Asp	Asn	Met	Lys
		35				40						45			
Lys	Glu	Met	Val	Glu	Ile	Gln	Gln	Asn	Ala	Val	Gln	Asn	Gln	Thr	Ala
	50					55					60				
Val	Met	Ile	Glu	Ile	Gly	Thr	Asn	Leu	Leu	Asn	Gln	Thr	Ala	Glu	Gln
65				70						75				80	
Thr	Arg	Lys	Leu	Thr	Asp	Val	Glu	Ala	Gln	Val	Leu	Asn	Gln	Thr	Thr
				85					90					95	



Arg Leu Glu Leu Gln Leu Leu Glu His Ser Leu Ser Thr Asn Lys Leu  
100 105 110

Glu Lys Gln Ile Leu Asp Gln Thr Ser Glu Ile Asn Lys Leu Gln Asp  
115 120 125

Lys Asn Ser Phe Leu Glu Lys Lys Val Leu Ala Met Glu Asp Lys His  
130 135 140

Ile Ile Gln Leu Gln Ser Ile Lys Glu Glu Lys Asp Gln Leu Gln Val  
145 150 155 160

Leu Val Ser Lys Gln Asn Ser Ile Ile Glu Glu Leu Glu Lys Lys Ile  
165 170 175

Val Thr Ala Thr Val Asn Asn Ser Val Leu Gln Lys Gln Gln His Asp  
180 185 190

Leu Met Glu Thr  
195

<210> 109

<211> 105

<212> PRT

<213> Homo sapiens

<400> 109

His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His Ala Glu Arg  
1 5 10 15

Thr Arg Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu Ser Ala Cys Gly  
20 25 30

Ser Ala Cys Gln Gly Thr Glu Gly Ser Thr Asp Leu Pro Leu Ala Pro  
35 40 45

Glu Ser Arg Val Asp Pro Glu Val Leu His Ser Leu Gln Thr Gln Leu  
50 55 60

Lys Ala Gln Asn Ser Arg Ile Gln Gln Leu Phe His Lys Val Ala Gln  
65 70 75 80

Gln Gln Arg His Leu Glu Lys Gln His Leu Arg Ile Gln His Leu Gln  
85 90 95

Ser Gln Phe Gly Leu Leu Asp His Lys  
100 105

<210> 110

<211> 192

<212> PRT

<213> Homo sapiens

<400> 110

Gly Pro Ile Cys Val Asn Thr Lys Gly Gln Asp Ala Ser Thr Ile Lys  
1 5 10 15

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Asp Met Ile Thr Arg Met Asp Leu Glu Asn Leu Lys Asp Val Leu Ser
    20                25                30

Arg Gln Lys Arg Glu Ile Asp Val Leu Gln Leu Val Val Asp Val Asp
    35                40                45

Gly Asn Ile Val Asn Glu Val Lys Leu Leu Arg Lys Glu Ser Arg Asn
    50                55                60

Met Asn Ser Arg Val Thr Gln Leu Tyr Met Gln Leu Leu His Glu Ile
    65                70                75                80

Ile Arg Lys Arg Asp Asn Ser Leu Glu Leu Ser Gln Leu Glu Asn Lys
    85                90                95

Ile Leu Asn Val Thr Thr Glu Met Leu Lys Met Ala Thr Arg Tyr Arg
    100               105               110

Glu Leu Glu Val Lys Tyr Ala Ser Leu Thr Asp Leu Val Asn Asn Gln
    115               120               125

Ser Val Met Ile Thr Leu Leu Glu Glu Gln Cys Leu Arg Ile Phe Ser
    130               135               140

Arg Gln Asp Thr His Val Ser Pro Pro Leu Val Gln Val Val Pro Gln
    145               150               155               160

His Ile Pro Asn Ser Gln Gln Tyr Thr Pro Gly Leu Leu Gly Gly Asn
    165               170               175

Glu Ile Gln Arg Asp Pro Gly Tyr Pro Arg Asp Leu Met Pro Pro Pro
    180               185               190

<210> 111
<211> 135
<212> PRT
<213> Homo sapiens

<400> 111

Asp Ala Ser Thr Ile Lys Asp Met Ile Thr Arg Met Asp Leu Glu Asn
 1                5                10                15

Leu Lys Asp Val Leu Ser Arg Gln Lys Arg Glu Ile Asp Val Leu Gln
    20                25                30

Leu Val Val Asp Val Asp Gly Asn Ile Val Asn Glu Val Lys Leu Leu
    35                40                45

Arg Lys Glu Ser Arg Asn Met Asn Ser Arg Val Thr Gln Leu Tyr Met
    50                55                60

Gln Leu Leu His Glu Ile Ile Arg Lys Arg Asp Asn Ser Leu Glu Leu
    65                70                75                80

Ser Gln Leu Glu Asn Lys Ile Leu Asn Val Thr Thr Glu Met Leu Lys
    85                90                95

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Met Ala Thr Arg Tyr Arg Glu Leu Glu Val Lys Tyr Ala Ser Leu Thr  
 100 105 110

Asp Leu Val Asn Asn Gln Ser Val Met Ile Thr Leu Leu Glu Glu Gln  
 115 120 125

Cys Leu Arg Ile Phe Ser Arg  
 130 135

<210> 112

<211> 101

<212> PRT

<213> Homo sapiens

<400> 112

Glu Leu Glu Leu Leu Asn Asn Glu Leu Leu Lys Gln Lys Arg Gln Ile  
 1 5 10 15

Glu Thr Leu Gln Gln Leu Val Glu Val Asp Gly Gly Ile Val Ser Glu  
 20 25 30

Val Lys Leu Leu Arg Lys Glu Ser Arg Asn Met Asn Ser Arg Val Thr  
 35 40 45

Gln Leu Tyr Met Gln Leu Leu His Glu Ile Ile Arg Lys Arg Asp Asn  
 50 55 60

Ala Leu Glu Leu Ser Gln Leu Glu Asn Arg Ile Leu Asn Gln Thr Ala  
 65 70 75 80

Asp Met Leu Gln Leu Ala Ser Lys Tyr Lys Asp Leu Glu His Lys Tyr  
 85 90 95

Gln His Leu Ala Thr  
 100

<210> 113

<211> 493

<212> PRT

<213> Homo sapiens

<400> 113

Met Arg Pro Leu Cys Val Thr Cys Trp Trp Leu Gly Leu Leu Ala Ala  
 1 5 10 15

Met Gly Ala Val Ala Gly Gln Glu Asp Gly Phe Glu Gly Thr Glu Glu  
 20 25 30

Gly Ser Pro Arg Glu Phe Ile Tyr Leu Asn Arg Tyr Lys Arg Ala Gly  
 35 40 45

Glu Ser Gln Asp Lys Cys Thr Tyr Thr Phe Ile Val Pro Gln Gln Arg  
 50 55 60

Val Thr Gly Ala Ile Cys Val Asn Ser Lys Glu Pro Glu Val Leu Leu  
 65 70 75 80

Glu Asn Arg Val His Lys Gln Glu Leu Glu Leu Leu Asn Asn Glu Leu  
 85 90 95  
 Leu Lys Gln Lys Arg Gln Ile Glu Thr Leu Gln Gln Leu Val Glu Val  
 100 105 110  
 Asp Gly Gly Ile Val Ser Glu Val Lys Leu Leu Arg Lys Glu Ser Arg  
 115 120 125  
 Asn Met Asn Ser Arg Val Thr Gln Leu Tyr Met Gln Leu Leu His Glu  
 130 135 140  
 Ile Ile Arg Lys Arg Asp Asn Ala Leu Glu Leu Ser Gln Leu Glu Asn  
 145 150 155 160  
 Arg Ile Leu Asn Gln Thr Ala Asp Met Leu Gln Leu Ala Ser Lys Tyr  
 165 170 175  
 Lys Asp Leu Glu His Lys Tyr Gln His Leu Ala Thr Leu Ala His Asn  
 180 185 190  
 Gln Ser Glu Ile Ile Ala Gln Leu Glu Glu His Cys Gln Arg Val Pro  
 195 200 205  
 Ser Ala Arg Pro Val Pro Gln Pro Pro Pro Ala Ala Pro Pro Arg Val  
 210 215 220  
 Tyr Gln Pro Pro Thr Tyr Asn Arg Ile Ile Asn Gln Ile Ser Thr Asn  
 225 230 235 240  
 Glu Ile Gln Ser Asp Gln Asn Leu Lys Val Leu Pro Pro Pro Leu Pro  
 245 250 255  
 Thr Met Pro Thr Leu Thr Ser Leu Pro Ser Ser Thr Asp Lys Pro Ser  
 260 265 270  
 Gly Pro Trp Arg Asp Cys Leu Gln Ala Leu Glu Asp Gly His Asp Thr  
 275 280 285  
 Ser Ser Ile Tyr Leu Val Lys Pro Glu Asn Thr Asn Arg Leu Met Gln  
 290 295 300  
 Val Trp Cys Asp Gln Arg His Asp Pro Gly Gly Trp Thr Val Ile Gln  
 305 310 315 320  
 Arg Arg Leu Asp Gly Ser Val Asn Phe Phe Arg Asn Trp Glu Thr Tyr  
 325 330 335  
 Lys Gln Gly Phe Gly Asn Ile Asp Gly Glu Tyr Trp Leu Gly Leu Glu  
 340 345 350  
 Asn Ile Tyr Trp Leu Thr Asn Gln Gly Asn Tyr Lys Leu Leu Val Thr  
 355 360 365  
 Met Glu Asp Trp Ser Gly Arg Lys Val Phe Ala Glu Tyr Ala Ser Phe  
 370 375 380  
 Arg Leu Glu Pro Glu Ser Glu Tyr Tyr Lys Leu Arg Leu Gly Arg Tyr  
 385 390 395 400

His Gly Asn Ala Gly Asp Ser Phe Thr Trp His Asn Gly Lys Gln Phe  
 405 410 415  
 Thr Thr Leu Asp Arg Asp His Asp Val Tyr Thr Gly Asn Cys Ala His  
 420 425 430  
 Tyr Gln Lys Gly Gly Trp Trp Tyr Asn Ala Cys Ala His Ser Asn Leu  
 435 440 445  
 Asn Gly Val Trp Tyr Arg Gly Gly His Tyr Arg Ser Arg Tyr Gln Asp  
 450 455 460  
 Gly Val Tyr Trp Ala Glu Phe Arg Gly Gly Ser Tyr Ser Leu Lys Lys  
 465 470 475 480  
 Val Val Met Met Ile Arg Pro Asn Pro Asn Thr Phe His  
 485 490

<210> 114  
 <211> 54  
 <212> PRT  
 <213> Homo sapiens

<400> 114

Thr Asn Lys Leu Glu Arg Gln Met Leu Met Gln Ser Arg Glu Leu Gln  
 1 5 10 15  
 Arg Leu Gln Gly Arg Asn Arg Ala Leu Glu Thr Arg Leu Gln Ala Leu  
 20 25 30  
 Glu Ala Gln His Gln Ala Gln Leu Asn Ser Leu Gln Glu Lys Arg Glu  
 35 40 45  
 Gln Leu His Ser Leu Leu  
 50

<210> 115  
 <211> 145  
 <212> PRT  
 <213> Homo sapiens

<400> 115

Thr Gln Gln Val Lys Gln Leu Glu Gln Ala Leu Gln Asn Asn Thr Gln  
 1 5 10 15  
 Trp Leu Lys Lys Leu Glu Arg Ala Ile Lys Thr Ile Leu Arg Ser Lys  
 20 25 30  
 Leu Glu Gln Val Gln Gln Gln Met Ala Gln Asn Gln Thr Ala Pro Met  
 35 40 45  
 Leu Glu Leu Gly Thr Ser Leu Leu Asn Gln Thr Thr Ala Gln Ile Arg  
 50 55 60  
 Lys Leu Thr Asp Met Glu Ala Gln Leu Leu Asn Gln Thr Ser Arg Met  
 65 70 75 80

Asp Ala Gln Met Pro Glu Thr Phe Leu Ser Thr Asn Lys Leu Glu Asn  
85 90 95

Gln Leu Leu Leu Gln Arg Gln Lys Leu Gln Gln Leu Gln Gly Gln Asn  
100 105 110

Ser Ala Leu Glu Lys Arg Leu Gln Ala Leu Glu Thr Lys Gln Gln Glu  
115 120 125

Glu Leu Ala Ser Ile Leu Ser Lys Lys Ala Lys Leu Leu Asn Thr Leu  
130 135 140

Ser  
145

<210> 116  
<211> 465  
<212> DNA  
<213> Homo sapiens

<400> 116  
gcccatggag agactgctg caggccctgg aggatggcca cgacaccagc tccatctacc 60  
tggatgaagc ggagaacacc aaccgcctca tgcagggtgt gtgcgaccag agacacgacc 120  
ccgggggctg gaccgtcatc cagagacgcc tggatggctc tgtaacttc ttcaggaact 180  
gggagacgta caagcaaggg ttggaaca ttgacggcga atactggctg ggccctggaga 240  
acatttactg gctgacgaac caaggcaact acaactcct ggtgaccatg gaggactggt 300  
ccggccgcaa agtctttgca gaatacgcca gttccgcct ggaacctgag agcgagtatt 360  
ataagctgct gctggggcgc taccatggca atgcgggtga ctcttttaca tggcacaacg 420  
gcaagcagtt caccacccag gacagagatc atgatgtcta cacag 465

<210> 117  
<211> 305  
<212> DNA  
<213> Homo sapiens

<400> 117  
ggattgccag gagctgttcc aggttgggga gaggcagagt ggactatttg aaatccagcc 60  
tcagggtgtc ccgccatttt tggatgaactg caagatgacc tcagatggag gctggacagt 120  
aattcagagg cgccacgatg gctcagtggc ctcaaccgg ccctkggtag cctacaaggc 180  
ggtggttttg ggggatcccc acggcgagtt ctggcttggg tcttgagaa aggkcatag 240  
catcacgggg ggaccggaac agccgmctgg ccgtgcaamc tgcggggact gggatgggca 300  
aacgc 305

<210> 118  
<211> 458  
<212> DNA

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<213> Homo sapiens

<220>
<221> misc_feature
<222> (224)..(244)
<223> "n" may be any nucleotide

<220>
<221> misc_feature
<222> (347)..(347)
<223> "n" may be any nucleotide

<220>
<221> misc_feature
<222> (353)..(353)
<223> "n" may be any nucleotide

<220>
<221> misc_feature
<222> (384)..(384)
<223> "n" may be any nucleotide

<220>
<221> misc_feature
<222> (400)..(400)
<223> "n" may be any nucleotide

<220>
<221> misc_feature
<222> (446)..(446)
<223> "n" may be any nucleotide

<400> 118
attataagct gcggctgggg cgataccatg gcaatgcggg tgactccttt acatggcaca 60
acggcaagca gttcaccacc ctggacagag atcatgatgt ctacacagga aactgtgccc 120
actaccagaa gggaggcttg tggtataacg cctgtgcccc ctccaacctc aaccgggggtc 180
tggtaccgcg gggggcatta ccggagccgc taccaggacg gagngtactg ggtctgagttc 240
cgaggaggct ctactcact caaggaaacg tggatgatgat gatccgaccg aacccaaca 300
ccttccacta agccagctcc cctcctgac ctctccgttg ccattgncag gangcccacc 360
ctggtcacgc tggccacagc acanagaaca actcctcacn agttcatcct gaggctggga 420
ggaccgggat gctggattct gttttnccga agtcactg 458

<210> 119
<211> 173
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

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<400> 119
tataagctgc ggctggggcg ataccatggc aatgcgggtg actcctttac atggcacaac      60

ggcaagcagt tcaccacctt ggacagagat catgatgtct acacaggaaa ctgtgccccac      120

taccagaagg gaggtcgtg gtataacgcc tgtgccact ccaacctcaa ccg              173

<210> 120
<211> 638
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> {}..{}
<223> Synthetic

<400> 120
gcccatggag agactgcctg caggccctgg aggatggcca cgacaccagc tccatctacc      60

tgggtgaagc ggagaacacc aaccgcctca tgcagggtgt gtgcgaccag agacacgacc      120

ccgggggctg gaccgtcatc cagagacgcc tggatggctc tgtaacttc ttcaggaact      180

gggagacgta caagcaaggg ttggaaca ttgacggcga atactggctg ggcctggaga      240

acatttactg gctgacgaac caaggcaact acaaaactcct ggtgaccatg gaggactggt      300

ccggcgcaaa agtctttgca gaatacgcca gttccgcctt ggaacctgag agcgagtatt      360

ataagctgcg gctggggcgc taccatggca atcggggtga ctcttttaca tggcacaacg      420

gcaagcagtt caccaccagc gacagagatc atgatgtcta cacagtataa gctgcggctg      480

gggcgatacc atggcaatgc ggggtactcc ttacatggc acaacggcaa gcagttcacc      540

accctgaca gagatcatga tgtctacaca ggaaactgtg cccactacca gaaggaggc      600

tgggtgtata acgcctgtgc ccaactccaac ctcaaccg              638

<210> 121
<211> 4045
<212> DNA
<213> Artificial/Unknown

<220>
<221> misc_feature
<222> {}..{}
<223> Synthetic

<400> 121
gcccatggag agaactgcctg caggccctgg aggatggcca cgacaccagc tccatctacc      60

tgggtgaagc ggagaacacc aaccgcctca tgcagggtgt gtgcgaccag agacacgacc      120

ccgggggctg gaccgtcatc cagagacgcc tggatggctc tgtaacttc ttcaggaact      180

gggagacgta caagcaaggg ttggaaca ttgacggcga atactggctg ggcctggaga      240

```



acatttactg gctgacgaac caaggcaact acaaaactcct ggtgaccatg gaggactggt 300  
 cgggccgcaa agtcttttga gaatacgcca gtttccgcct ggaacctgag agcgagtatt 360  
 ataagctgcg gctggggcgc taccatggca atgcgggtga ctccctttaca tggcacaacg 420  
 gcaagcagtt caccaccagc gacagagatc atgatgtcta cacagtataa gctgcggctg 480  
 gggcgatacc atggcaatgc ggggtactcc ttacatggc acaacggcaa gcagttcacc 540  
 accctggaca gagatcatga tgtctacaca ggaaaactgtg cccactacca gaagggaggc 600  
 tgggtgtata acgcctgtgc ccactccaac ctcaacggga aaaagagagg aagagaaacc 660  
 atttagagac tgtgcagatg tatatcaagc tggttttaat aaaagtggaa tctacactat 720  
 ttatattaat aatatgccag aacccaaaaa ggtgttttgc aatatggatg tcaatggggg 780  
 aggttggaat gtaatacaac atcgtgaaga tggaaagtcta gatttccaaa gaggctggaa 840  
 ggaatataaa atgggttttg gaaatccctc cggatgaatg tggctgggga atgagtttat 900  
 ttttgccatt accagtcaga ggcagtacat gctaagaatt gagttaatgg actgggaagg 960  
 gaaccgagcc tattcacagt atgacagatt ccacatagga aatgaaaagc aaaactatag 1020  
 gttgtattta aaaggtcaca ctgggacagc aggaaaaacag agcagcctga tcttacacgg 1080  
 tgctgatttc agcactaaaag atgctgataa tgacaactgt atgtgcaaat gtgccctcat 1140  
 gttaacagga ggatgggtgt ttgatgcttg tggccctccc aatctaaaat gaatgttcta 1200  
 tactgcggga caaaaccatg gaaaactgaa tgggataaag tggcactact tcaaagggcc 1260  
 cagttactcc ttacgttcca caactatgat gattcgacct ttagattttt gaaagcgcaa 1320  
 tgtcagaagc gattatgaaa gcaacaaaga aatccggaga agctgccagg tgagaaactg 1380  
 tttgaaaaact tcagaagcaa acaatatgtg ctcccttcca gcaataagtg gtagttatgt 1440  
 gaagtcacca aggttcttga ccgtgaatct ggagccgttt gagttcacia gagtctctac 1500  
 ttggggtgac agtgctcacg tggctcgact atagaaaaact ccactgactg tcgggcttta 1560  
 aaaagggag aaactgctga gcttgctgtg cttcaaaact ctactggacc ttatttttga 1620  
 actatggtag ccagatgata aatatgggta atttcatgta aaacagaaaa aaagagtga 1680  
 aaagagaata tacatgaaga atagaacaaa gctcgccata atccttttga aaagatgtat 1740  
 tataccagtg aaaaggcggt atatctatgc aaacctacta acaaattata ctgttcaca 1800  
 attttgataa aaatttagaa cagcattgtc ctctgagttg gttaaatgtt aatggatttc 1860  
 agaagcctaa ttccagatc atacttacta gttgatttct gttaccocat cttcaaatga 1920  
 aaattccatt tttgaagcc ataataaact gtagtacatg gacaataagt gtgtggtaga 1980  
 aacaaactcc attactctga tttttgatac agttttcaga aaaagaaatg aacataatca 2040

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 aaactgattg aatgatataa aaatatattt atagcctgag taaagttaaa agaattgtaa 2160  
 atatatcacc aagttcttaa aataatatac atgcatttaa ttttctctt gatattatac 2220  
 aggaaagcaa tttttggag tatgttaagt tgaagtaaaa ccaagtactc tggagcagtt 2280  
 cattttacag tatctacttg catgtgtata catacatgta acttcattat tttaaaaata 2340  
 tttttagaac tccaatactc accctgttat gtcttgctaa tttaaatctt gctaattaac 2400  
 tgaacatgc ttaccagatt cacactgttc cagtgtctat aaaagaaaca ctttgaagtc 2460  
 tataaaaaat aaaataatta taaatatcat tgtacatagc atgtttatat ctgcaaaaaa 2520  
 cctaatagct aattaactcg gaatatgcaa cattgtcctt aattgatgca aataacacaa 2580  
 atgtctaaag aaactacta tatcccttaa tgaatacat cattcttcat atatttctcc 2640  
 ttcagtcctt tcccttaggc aatttttaaa ttttaaaaaa tattatcagg ggagaaaaat 2700  
 tggcaaaact attatatgta agggatatat atatacaaaa agaaaattaa tcatagtcac 2760  
 ctgactaaga aattctgact gctagtgtgc ataaataact caatggaaat attcctatgg 2820  
 gataatgtat ttttaagtga tttttgggtt gcttgaagtt actgcattat tttatcaaga 2880  
 agtctctctc gctgttaagt gtccaaggtt atgacagtaa acagttttta ttaaaacatg 2940  
 agtcactatg gtaggagaaa attgaaataa agctactggg cctcctctca taaaagagac 3000  
 agttgttggt aaggtagcaa taccagtttc aaacttggtg acttgatcca ctatgcctta 3060  
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 agtttaccat caagtctttt ttatatattt gtgtctgtat tctacccctt tttgccttac 3180  
 aagtgatatt tgcaggtatt ataccatttt tctattcttg gtggtctctt catagcaggt 3240  
 aagcctctcc ttctaaaaac ttctcaactg ttttcattta agggaaagaa aatgagtatt 3300  
 ttgtcctttt gtgttcttac agacactttc ttaaaccagt ttttggtata agaatactat 3360  
 ttccaaactc atattacaaa aacaaaaata aataataaaa aaagaaagca tgatatttac 3420  
 tgtttttgtg tctgggtttg agaaatgaaa tattgttttc aattatttat aataaatcag 3480  
 tataaaatgt tttatgattg ttatgtgtat tatgtaatac gtacatgttt atggcaattt 3540  
 aacatgtgta ttcttttcat ttaattgttt cagaatagga taattaggtta ttgcaatttt 3600  
 gtctttaaaa ttcatgttgt ttctatgcaa agttcttcat atcatcacia cattatttga 3660  
 ttttaaaaaa attgaaagtg caccatggc agaaggagga gggcagaatc atcacgaagt 3720  
 ggtgaagttc atggatgtct atcagcgag ctactgccat ccaatcgaga ccttggtgga 3780

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catcttccag gagtaccctg atgagatcga gtacatcttc aagccatcct gtgtgccctt 3840
gatgcgatgc gggggctgct gcaatgacga gggcctggag tgtgtgccca ctgaggagtc 3900
caacatcacc atgcagatta tgcggatcaa acctcaccaa ggccagcaca taggagagat 3960
gagcttccta cagcacaaca aatgtgaatg cagaccaaag aaagatagag caagacaaga 4020
aaaatgtgac aagccgaggc ggtga 4045

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<210> 122
<211> 280
<212> PRT
<213> Artificial/Unknown

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<220>
<221> misc_feature
<222> ()..()
<223> Synthetic

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<400> 122

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Met Trp Gln Ile Val Phe Phe Thr Leu Ser Cys Asp Leu Val Leu Ala
1 5 10 15

```

```

Ala Ala Tyr Asn Asn Phe Arg Lys Ser Met Asp Ser Ile Gly Lys Lys
20 25 30

```

```

Gln Tyr Gln Val Gln His Gly Ser Cys Ser Tyr Thr Phe Leu Leu Pro
35 40 45

```

```

Glu Met Asp Asn Cys Arg Ser Ser Ser Ser Pro Tyr Val Ser Asn Ala
50 55 60

```

```

Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Asp Ser Val Gln Arg Leu
65 70 75 80

```

```

Gln Val Leu Glu Asn Ile Met Glu Asn Asn Thr Gln Trp Leu Met Lys
85 90 95

```

```

Val Glu Asn Ile Ser Gln Asp Asn Met Lys Lys Glu Met Val Glu Ile
100 105 110

```

```

Gln Gln Asn Ala Val Gln Asn Gln Thr Ala Val Met Ile Glu Ile Gly
115 120 125

```

```

Thr Asn Leu Leu Asn Gln Thr Ala Glu Gln Thr Arg Lys Leu Thr Asp
130 135 140

```

```

Val Glu Ala Gln Val Leu Asn Gln Thr Thr Arg Leu Glu Leu Gln Leu
145 150 155 160

```

```

Leu Glu His Ser Leu Ser Thr Asn Lys Leu Glu Lys Gln Ile Leu Asp
165 170 175

```

```

Gln Thr Ser Glu Ile Asn Lys Leu Gln Asp Lys Asn Ser Phe Leu Glu
180 185 190

```

```

Lys Lys Val Leu Ala Met Glu Asp Lys His Ile Ile Gln Leu Gln Ser

```

195 200 205

Ile Lys Glu Glu Lys Asp Gln Leu Gln Val Leu Val Ser Lys Gln Asn  
210 215 220

Ser Ile Ile Glu Glu Leu Glu Lys Lys Ile Val Thr Ala Thr Val Asn  
225 230 235 240

Asn Ser Val Leu Gln Lys Gln Gln His Asp Leu Met Glu Thr Val Asn  
245 250 255

Asn Leu Leu Thr Met Met Ser Thr Ser Asn Ala Ala Lys Asp Pro Thr  
260 265 270

Val Ala Lys Glu Glu Gln Ile Ser  
275 280

<210> 123  
<211> 221  
<212> PRT  
<213> Homo sapiens

<400> 123

Glu Glu Glu Lys Pro Phe Arg Asp Cys Ala Asp Val Tyr Gln Ala Gly  
1 5 10 15

Phe Asn Lys Ser Gly Ile Tyr Thr Ile Tyr Ile Asn Asn Met Pro Glu  
20 25 30

Pro Lys Lys Val Phe Cys Asn Met Asp Val Asn Gly Gly Gly Trp Thr  
35 40 45

Val Ile Gln His Arg Glu Asp Gly Ser Leu Asp Phe Gln Arg Gly Trp  
50 55 60

Lys Glu Tyr Lys Met Gly Phe Gly Asn Pro Ser Gly Glu Tyr Trp Leu  
65 70 75 80

Gly Asn Glu Phe Ile Phe Ala Ile Thr Ser Gln Arg Gln Tyr Met Leu  
85 90 95

Arg Ile Glu Leu Met Asp Trp Glu Gly Asn Arg Ala Tyr Ser Gln Tyr  
100 105 110

Asp Arg Phe His Ile Gly Asn Glu Lys Gln Asn Tyr Arg Leu Tyr Leu  
115 120 125

Lys Gly His Thr Gly Thr Ala Gly Lys Gln Ser Ser Leu Ile Leu His  
130 135 140

Gly Ala Asp Phe Ser Thr Lys Asp Ala Asp Asn Asp Asn Cys Met Cys  
145 150 155 160

Lys Cys Ala Leu Met Leu Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly  
165 170 175

Pro Ser Asn Leu Asn Gly Met Phe Tyr Thr Ala Gly Gln Asn His Gly  
180 185 190

Lys Leu Asn Gly Ile Lys Trp His Tyr Phe Lys Gly Pro Ser Tyr Ser  
 195 200 205

Leu Arg Ser Thr Thr Met Met Ile Arg Pro Leu Asp Phe  
 210 215 220

<210> 124

<211> 1506

<212> DNA

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ( ) . ( )

<223> Synthetic

<400> 124

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atgtggcaga ttgttttctt tactctgagc tgtgatcttg tcttgccgcg agcctataac      60
aactttcgga agagcatgga cagcatagga aagaagcaat atcagggtcca geatgggtcc      120
tgcagctaca ctttctctct gccagagatg gacaactgcc gctcttctct cagcccttac      180
gtgtccaatg ctgtgcagag ggacgcgcgcg ctgcaatacg atgactcggt gcagaggctg      240
caagtgtctg agaacatcat ggaaaaaacac actcagtggc taatgaaggc agagaatata      300
tcccaggaca acatgaagaa agaaatggta gagatacagc agaatgcagt acagaaccag      360
acggctgtga tgatagaaat agggacaaaac ctgttgaacc aaacagcggg gcaaacgcgg      420
aagttaactg atgtggaagc ccaagtatta aatcagacca cgagacttga acttcagctc      480
ttggaacctt ccctctcgac aaacaaattg gaaaaacaga ttttggaaca gaccagtga      540
ataaacaaat tgcaagataa gaacagtttc ctagaaaaaag aggtgctagc tatggaagac      600
aagcacatca tccaactaca gtcaataaaa gaagagaaag atcagctaca ggtgttagta      660
tccaagcaga attccatcat tgaagaactc gaaaaaaaaa tagtgactgc cagggtgaat      720
aattcagttc ttcagaagca gcaacatgat ctcatggaga cagttaataa cttactgact      780
atgatgtcca catcaaacgc agctaaggac cccactgttg ctaaagaaga acaaatcagc      840
gaggaagaga aaccatttag agactgtgca gatgtatatc aagctggttt taataaaagt      900
ggaatctaca ctattttatat taataatatg ccagaaccca aaaagggtgt ttgcaatatg      960
gatgtcaatg ggggaggttg gactgtaata caacatcgtg aagatggaag tctagatttc     1020
caaagaggct ggaaggaata taaaatgggt tttggaatac cctccggtga atattggctg     1080
gggaatgagt ttattttttgc cattaccagt cagaggcagt acatgctaag aattgagtta     1140
atggactggg aagggaaacc agcctattca cagtatgaca gattccacat aggaaatgaa     1200
aagcaaaact ataggttgta tttaaaaggt cactctggga cagcaggaaa acagagcagc     1260

```

ctgatcttac acggtgctga tttcagcact aaagatgctg ataatgacaa ctgtatgtgc 1320  
 aaatgtgccc tcatgttaac aggaggatgg tggtttgatg cttgtggccc ctccaatcta 1380  
 aatggaatgt tctatactgc gggacaaaac catggaaaac tgaatgggat aaagtggcac 1440  
 tacttcaaag ggcccagtta ctccttacgt tccacaacta tgatgattcg accttagatg 1500  
 ttttga 1506

<210> 125  
 <211> 501  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> Synthetic

<400> 125

Met Trp Gln Ile Val Phe Phe Thr Leu Ser Cys Asp Leu Val Leu Ala  
 1 5 10 15

Ala Ala Tyr Asn Asn Phe Arg Lys Ser Met Asp Ser Ile Gly Lys Lys  
 20 25 30

Gln Tyr Gln Val Gln His Gly Ser Cys Ser Tyr Thr Phe Leu Leu Pro  
 35 40 45

Glu Met Asp Asn Cys Arg Ser Ser Ser Pro Tyr Val Ser Asn Ala  
 50 55 60

Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Ser Val Gln Arg Leu  
 65 70 75 80

Gln Val Leu Glu Asn Ile Met Glu Asn Asn Thr Gln Trp Leu Met Lys  
 85 90 95

Val Glu Asn Ile Ser Gln Asp Asn Met Lys Lys Glu Met Val Glu Ile  
 100 105 110

Gln Gln Asn Ala Val Gln Asn Gln Thr Ala Val Met Ile Glu Ile Gly  
 115 120 125

Thr Asn Leu Leu Asn Gln Thr Ala Glu Gln Thr Arg Lys Leu Thr Asp  
 130 135 140

Val Glu Ala Gln Val Leu Asn Gln Thr Thr Arg Leu Glu Leu Gln Leu  
 145 150 155 160

Leu Glu His Ser Leu Ser Thr Asn Lys Leu Glu Lys Gln Ile Leu Asp  
 165 170 175

Gln Thr Ser, Glu Ile Asn Lys Leu Gln Asp Lys Asn Ser Phe Leu Glu  
 180 185 190

Lys Lys Val Leu Ala Met Glu Asp Lys His Ile Ile Gln Leu Gln Ser  
 195 200 205  
 Ile Lys Glu Glu Lys Asp Gln Leu Gln Val Leu Val Ser Lys Gln Asn  
 210 215 220  
 Ser Ile Ile Glu Glu Leu Glu Lys Lys Ile Val Thr Ala Thr Val Asn  
 225 230 235 240  
 Asn Ser Val Leu Gln Lys Gln Gln His Asp Leu Met Glu Thr Val Asn  
 245 250 255  
 Asn Leu Leu Thr Met Met Ser Thr Ser Asn Ala Ala Lys Asp Pro Thr  
 260 265 270  
 Val Ala Lys Glu Glu Gln Ile Ser Glu Glu Glu Lys Pro Phe Arg Asp  
 275 280 285  
 Cys Ala Asp Val Tyr Gln Ala Gly Phe Asn Lys Ser Gly Ile Tyr Thr  
 290 295 300  
 Ile Tyr Ile Asn Asn Met Pro Glu Pro Lys Lys Val Phe Cys Asn Met  
 305 310 315 320  
 Asp Val Asn Gly Gly Gly Trp Thr Val Ile Gln His Arg Glu Asp Gly  
 325 330 335  
 Ser Leu Asp Phe Gln Arg Gly Trp Lys Glu Tyr Lys Met Gly Phe Gly  
 340 345 350  
 Asn Pro Ser Gly Glu Tyr Trp Leu Gly Asn Glu Phe Ile Phe Ala Ile  
 355 360 365  
 Thr Ser Gln Arg Gln Tyr Met Leu Arg Ile Glu Leu Met Asp Trp Glu  
 370 375 380  
 Gly Asn Arg Ala Tyr Ser Gln Tyr Asp Arg Phe His Ile Gly Asn Glu  
 385 390 395 400  
 Lys Gln Asn Tyr Arg Leu Tyr Leu Lys Gly His Thr Gly Thr Ala Gly  
 405 410 415  
 Lys Gln Ser Ser Leu Ile Leu His Gly Ala Asp Phe Ser Thr Lys Asp  
 420 425 430  
 Ala Asp Asn Asp Asn Cys Met Cys Lys Cys Ala Leu Met Leu Thr Gly  
 435 440 445  
 Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn Gly Met Phe  
 450 455 460  
 Tyr Thr Ala Gly Gln Asn His Gly Lys Leu Asn Gly Ile Lys Trp His  
 465 470 475 480  
 Tyr Phe Lys Gly Pro Ser Tyr Ser Leu Arg Ser Thr Thr Met Met Ile  
 485 490 495  
 Arg Pro Leu Asp Phe  
 500

<210> 126  
 <211> 648  
 <212> PRT  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ().()  
 <223> Synthetic

<400> 126

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Met Asn Phe Leu Leu Ser Trp Val His Trp Ser Leu Ala Leu Leu Leu
1          5          10          15

Tyr Leu His His Ala Lys Trp Ser Gln Ala Ala Pro Met Ala Glu Gly
          20          25          30

Gly Gly Gln Asn His His Glu Val Val Lys Phe Met Asp Val Tyr Gln
          35          40          45

Arg Ser Tyr Cys His Pro Ile Glu Thr Leu Val Asp Ile Phe Gln Glu
          50          55          60

Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys Pro Ser Cys Val Pro Leu
65          70          75          80

Met Arg Cys Gly Gly Cys Cys Asn Asp Glu Gly Leu Glu Cys Val Pro
          85          90          95

Thr Glu Glu Ser Asn Ile Thr Met Gln Ile Met Arg Ile Lys Pro His
          100          105          110

Gln Gly Gln His Ile Gly Glu Met Ser Phe Leu Gln His Asn Lys Cys
          115          120          125

Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg Gln Glu Lys Cys Asp Lys
          130          135          140

Pro Arg Arg Met Trp Gln Ile Val Phe Phe Thr Leu Ser Cys Asp Leu
145          150          155          160

Val Leu Ala Ala Ala Tyr Asn Asn Phe Arg Lys Ser Met Asp Ser Ile
          165          170          175

Gly Lys Lys Gln Tyr Gln Val Gln His Gly Ser Cys Ser Tyr Thr Phe
          180          185          190

Leu Leu Pro Glu Met Asp Asn Cys Arg Ser Ser Ser Ser Pro Tyr Val
          195          200          205

Ser Asn Ala Val Gln Arg Asp Ala Pro Leu Glu Tyr Asp Asp Ser Val
210          215          220

Gln Arg Leu Gln Val Leu Glu Asn Ile Met Glu Asn Asn Thr Gln Trp
225          230          235          240

Leu Met Lys Val Glu Asn Ile Ser Gln Asp Asn Met Lys Lys Glu Met

```



245										250					255				
Val	Glu	Ile	Gln	Gln	Asn	Ala	Val	Gln	Asn	Gln	Thr	Ala	Val	Met	Ile				
			260						265					270					
Glu	Ile	Gly	Thr	Asn	Leu	Leu	Asn	Gln	Thr	Ala	Glu	Gln	Thr	Arg	Lys				
		275						280					285						
Leu	Thr	Asp	Val	Glu	Ala	Gln	Val	Leu	Asn	Gln	Thr	Thr	Arg	Leu	Glu				
		290				295					300								
Leu	Gln	Leu	Leu	Glu	His	Ser	Leu	Ser	Thr	Asn	Lys	Leu	Glu	Lys	Gln				
		305			310						315				320				
Ile	Leu	Asp	Gln	Thr	Ser	Glu	Ile	Asn	Lys	Leu	Gln	Asp	Lys	Asn	Ser				
				325					330					335					
Phe	Leu	Glu	Lys	Lys	Val	Leu	Ala	Met	Glu	Asp	Lys	His	Ile	Ile	Gln				
			340					345					350						
Leu	Gln	Ser	Ile	Lys	Glu	Glu	Lys	Asp	Gln	Leu	Gln	Val	Leu	Val	Ser				
		355					360					365							
Lys	Gln	Asn	Ser	Ile	Ile	Glu	Glu	Lys	Lys	Lys	Ile	Val	Thr	Ala					
		370				375					380								
Thr	Val	Asn	Asn	Ser	Val	Leu	Gln	Lys	Gln	Gln	His	Asp	Leu	Met	Glu				
		385			390					395					400				
Thr	Val	Asn	Asn	Leu	Leu	Thr	Met	Met	Ser	Thr	Ser	Asn	Ala	Ala	Lys				
				405					410					415					
Asp	Pro	Thr	Val	Ala	Lys	Glu	Glu	Gln	Ile	Ser	Glu	Glu	Glu	Lys	Pro				
			420					425					430						
Phe	Arg	Asp	Cys	Ala	Asp	Val	Tyr	Gln	Ala	Gly	Phe	Asn	Lys	Ser	Gly				
		435					440					445							
Ile	Tyr	Thr	Ile	Tyr	Ile	Asn	Asn	Met	Pro	Glu	Pro	Lys	Lys	Val	Phe				
		450				455					460								
Cys	Asn	Met	Asp	Val	Asn	Gly	Gly	Gly	Trp	Thr	Val	Ile	Gln	His	Arg				
		465			470					475				480					
Glu	Asp	Gly	Ser	Leu	Asp	Phe	Gln	Arg	Gly	Trp	Lys	Glu	Tyr	Lys	Met				
			485						490					495					
Gly	Phe	Gly	Asn	Pro	Ser	Gly	Glu	Tyr	Trp	Leu	Gly	Asn	Glu	Phe	Ile				
			500					505					510						
Phe	Ala	Ile	Thr	Ser	Gln	Arg	Gln	Tyr	Met	Leu	Arg	Ile	Glu	Leu	Met				
		515					520						525						
Asp	Trp	Glu	Gly	Asn	Arg	Ala	Tyr	Ser	Gln	Tyr	Asp	Arg	Phe	His	Ile				
		530				535					540								
Gly	Asn	Glu	Lys	Gln	Asn	Tyr	Arg	Leu	Tyr	Leu	Lys	Gly	His	Thr	Gly				
		545			550					555					560				

Thr Ala Gly Lys Gln Ser Ser Leu Ile Leu His Gly Ala Asp Phe Ser  
565 570 575

Thr Lys Asp Ala Asp Asn Asp Asn Cys Met Cys Lys Cys Ala Leu Met  
580 585 590

Leu Thr Gly Gly Trp Trp Phe Asp Ala Cys Gly Pro Ser Asn Leu Asn  
595 600 605

Gly Met Phe Tyr Thr Ala Gly Gln Asn His Gly Lys Leu Asn Gly Ile  
610 615 620

Lys Trp His Tyr Phe Lys Gly Pro Ser Tyr Ser Leu Arg Ser Thr Thr  
625 630 635 640

Met Met Ile Arg Pro Leu Asp Phe  
645